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Mr. David Szymanski
Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
270 Michigan Avenue – 3rd Floor
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RE: 2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site
NYSDEC Site #V00195

Dear Mr. Szymanski:

National Fuel Gas Distribution Corporation (National Fuel) completed construction on the remedial action for the Mineral Springs Road Former Manufactured Gas Plant (MGP) Site (Site) in 2001. Since then, National Fuel has performed operations and maintenance (O&M) activities for the remedy in accordance with the Final Engineering Report, Volume II – Operations and Maintenance (O&M) Plan, dated May 2002 (O&M Plan) for the project. Those activities have included preparation of annual O&M reports, which have been submitted since 2002. Because of changes in New York State Department of Environmental Conservation (NYSDEC) reporting requirements, AECOM has prepared this Periodic Review Report (PRR) on behalf of National Fuel rather than an O&M Report to meet the reporting requirements of the O&M Plan.

1. Introduction

The Former MGP was constructed in the early 1920s and operated until the 1960s. Coal and oil gasification wastes, specifically coal tar hydrocarbons and blue-stained purifier residuals, were generated during plant operation. Investigations were performed between 1990 and 1998 to evaluate environmental conditions at the site. Those investigations identified impacts to soil and groundwater by MGP residues, including organic constituents, dense non-aqueous phase liquids (DNAPL), and cyanide. Remedial activities including excavation, capping, DNAPL recovery, and institutional controls have been performed since 1997 to address these impacts.

This PRR presents and evaluates the results of annual O&M activities performed at the Site from September 16, 2016 to September 16, 2017, and analytical data from 2001 (remedial action completion) through August 2017. The annual O&M activities include annual inspections, groundwater and surface water monitoring, and maintenance and repair of engineering controls. In addition to the annual O&M activities, supplemental groundwater and surface monitoring was completed this reporting period, as further described below. Data collected during the performance of these activities and an evaluation of the remedy effectiveness is presented below.

2. Site Overview

The Site lies in a flat, mixed industrial and residential area of West Seneca (and Buffalo), New York. The Site is currently an active National Fuel service center. Figure 1 shows the facility layout.

The stratigraphy of the site consists of 4- to 8-feet of soil and fill, approximately 10-feet of a nearly continuous upper confining clay layer (UCL), 10- to 15-feet of groundwater-bearing silt, sand, and gravel, a lower confining clay layer (LCL), and bedrock. Overburden groundwater is typically encountered 5- to 12-feet below ground surface and fluctuates seasonally approximately 2 feet. Overburden groundwater flow is generally to the northwest towards Mineral Springs Road, Calais Street, and the Buffalo River. Average overburden groundwater velocity across the site is calculated to be approximately 0.06 feet per day.

In 1990 and 1995, investigations and soil remediation activities were performed near an oil-water separator pit in the central area of the site. In 1997 and 1998, a Preliminary Site Assessment (PSA) and a follow-up PSA Addendum were conducted. The assessments concluded that soil and groundwater at the site were impacted by MGP residues including dense non-aqueous phase liquids (DNAPL) and cyanide.

An interim remedial measure (IRM) was conducted at the Site in December 1997. During the IRM, 407 tons of purifier residuals were removed from the southwest corner of the Site. On August 4, 1998 National Fuel submitted a Voluntary Cleanup Agreement (VCA) program application. VCA number B9-0538-98-08 was signed by National Fuel on June 2, 1999 and by NYSDEC on November 7, 1999. A Remedial Design Work Plan was subsequently developed by National Fuel and NYSDEC. From May 2000 to June 2001, the Remedial Design Work Plan was implemented and the following remedial tasks were completed:

- Excavation and offsite disposal of 32,200 tons of contaminated soil, rubble, and purifier waste.
- Construction of engineering controls including 39,369 square feet of clay cap, 76,144 square feet of geomembrane and 130,890 square feet of asphalt cap over areas where purifier waste was located.
- Capping of hydrocarbon seeps within the Eastern Drainage Ditch (EDD), including construction of 640 linear feet of geosynthetic cap and 750 linear feet of clay cap.
- Installation of additional chain link security fence around the site perimeter.
- Implementation of site use and deed restrictions.
- Collection, treatment, and disposal of 207,000 gallons of contaminated groundwater.

In January 1998, National Fuel performed a soil gas survey to evaluate potential exposures to workers inside buildings at the Site. The report concluded that the results did not indicate a significant potential for exposure by site workers to excessive concentrations of airborne constituents resulting from soil gas migration into occupied building spaces.

During the annual site inspection in April 2007, National Fuel identified a faint blue stain in surface gravel near Building 8. In July 2007, a soil investigation in the area identified a subsurface lens of bluish stained soils. Based on the results of the investigation, an IRM Work Plan was prepared describing an IRM to address the stained soil. The IRM Work Plan was submitted to NYSDEC in November 2008. The scope of the IRM included installation of a 24,000 square foot asphalt cap immediately to the east of the existing Building 3 East Asphalt Cap (B3EAC). Work to install the new cap took place in June and July 2008. The new cap is designated as the Building 8 West Asphalt Cap (B8WAC), as shown on Figure 1.

In July 2013, soil impacted with purifier wastes was observed in the southwestern corner of the site, outside of the perimeter fence on the western and southwestern site boundaries, near residential properties on Calais Street. National Fuel completed a series of Corrective Measure (CM) activities in the area where impacts were observed. CM activities to address purifier waste impacted soils in the southwest corner near the west property line were implemented in November 2013. CM

activities to remove fill materials that exceeded the NYSDEC Residential Soil Cleanup Objectives were implemented in October 2014. CM activities area is designated CM, as shown on Figure 1.

3. 2017 Site Activities

Routine O&M activities performed during 2017 include the following:

- Annual inspection on April 18, 2017.
- Groundwater monitoring events on April 18, 2017 and August 9-10, 2017.
- Submittal of groundwater and surface water monitoring reports on May 31, 2017 and October 27, 2017.
- Cap maintenance activities:
    - Mowing of Eastern Swale High-Density Polyethylene (HDPE) Cap (ESHC) and Clay Cap (CC);
    - Trapping and relocating of woodchucks that have burrowed into the CC and filling of the animal burrows;
    - Repair to Building 3 South Asphalt Cap (B3SAC); and,
    - Repair to Building 10 Asphalt Cap (B10AC).

Other environmental activities which were completed at the Mineral Springs Site in the period covered by this report include the following:

- Removal of an old concrete slab and petroleum impacted soils encountered beneath it located off the southeast corner of Building #10. Excavated soils remain on Site, pending analysis and approval for disposal.
- As requested by NYSDEC in response to the free cyanide exceedance of the NYSDEC Class D Surface Water Standard in the April 2017 SW-02 surface water sample, a supplemental surface water level measurement was obtained and supplemental groundwater and surface water samples were collected and analyzed during the August 2017 monitoring event.

An activity not completed during 2017 was the repair, by Norfolk Southern (NS) Railroad, of the damaged storm sewer adjacent to, but just outside of, the southern property line and the CC area. Based on the results of an investigation that determined that the storm sewer was outside of the CC engineering control and the National Fuel property, AECOM submitted a letter to the NYSDEC on October 29, 2015 recommending that NS be allowed to perform repair activities provided that they did not damage the CC. On December 2, 2015, the NYSDEC provided AECOM with email approval of that action. To date, NS has not yet performed this repair.

4. Evaluation of Remedy Performance, Effectiveness, and Protectiveness

The objectives of the remedial action performed at the Site include the following:

- Preventing human contact with compounds of concern (COC) in purifier waste, soil, and sediment.
- Preventing human contact or ingestion of COC in groundwater.
- Preventing leaching of COC from purifier waste to groundwater.
- Preventing leaching of COC from coal tar impacted soil to surface water.

The first two objectives were addressed by excavating soil and purifier waste, capping areas where purifier waste was left in place, capping coal tar residues in the EDD, and implementing institutional controls to limit site use, prevent use of groundwater, and provide protection for excavation workers.

The remaining two objectives are addressed by excavating soil and purifier waste, capping areas where purifier waste was left in place, capping coal tar residues in the EDD, and removing DNAPL.

The effectiveness of these remedial actions in meeting these objectives is evaluated by 1) performing an annual inspection to verify that engineering controls remain intact and that site use has not changed, and 2) by implementing a groundwater and surface water monitoring program.

4.1 Analytical Results

Groundwater and surface water monitoring was performed at the Mineral Springs Site semi-annually (in April and August) in 2017. The monitoring programs were performed in accordance with the 2002 O&M Plan. As part of the August 2017 monitoring event, a supplemental surface water level measurement was obtained and supplemental groundwater and surface water samples were collected and analyzed as described in the Revised Supplemental Groundwater and Surface Water Cyanide Monitoring letter submitted to NYSDEC on July 31, 2017.

An evaluation of the groundwater and surface water monitoring results from data collected during the 2017 monitoring events is presented in the following sections. The analytical data are compared to the NYSDEC Technical Operational and Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (June 1998). Details of the results of these monitoring events are presented in the April 2017 and August 2017 Groundwater and Surface Water Monitoring Reports, submitted to NYSDEC in May 2017 and October 2017, respectively.

The free cyanide results for the August 2017 sampling event were observed to be higher than the historic range of concentrations. National Fuel is currently conducting an independent third-party data validation for both the total and free cyanide analyses, as well as an audit at Pace Analytical Laboratories in Grand Rapids, Michigan. These independent investigations are being performed in an effort to determine if the free cyanide results are accurate or if other factors may have affected the total and free cyanide analytical results reported for the August 2017 sampling event. The un-validated data are presented as reported from Pace Analytical in this report. Results of the data validation and any adjustments or qualification of the analytical results will be presented under separate cover.

Figures 2 and 3 provide groundwater contours indicating the direction of groundwater flow at the Site for April 2017 and August 2017, respectively. Appendix A presents the 2017 surface water and groundwater elevations and analytical results, as well as historic data from 1995 through 2016.

Upgradient Site Perimeter

Monitoring well MW-17 monitors groundwater quality upgradient of the Site remedial actions. The groundwater sample from this well is analyzed semi-annually for benzene, ethylbenzene, toluene, and xylene (BTEX), polycyclic aromatic hydrocarbons (PAHs), total cyanide, and free cyanide. No BTEX compounds were detected in either of the two sampling events. A summary of the PAH and cyanide detections follows:

- April 2017:
    - No PAH compounds were detected.
    - Total cyanide was detected at a concentration of 124 µg/L, below the NYSDEC Groundwater Standard of 200 µg/L. Free cyanide was not detected.

- August 2017:
    - Naphthalene was detected at a concentration of 0.45 J µg/L, below the NYSDEC Groundwater Guidance Value of 10 µg/L.
    - Total cyanide was detected at a concentration of 173 J+ µg/L, below the NYSDEC Groundwater Standard of 200 µg/L. Free cyanide was not detected.

Downgradient Site Perimeter

Six "sentinel" wells monitor groundwater quality downgradient of the Site remedial actions. These wells include MW-13, MW-14, MW-22 and MW-23 located just inside the northern property boundary near Mineral Springs Road and MW-20 and MW-21 located downgradient of the western Site boundary on Calais Street. The groundwater samples from these six wells are analyzed semi-annually for total and free cyanide. The results of monitoring in these wells are summarized below:

- April 2017: Five of the six wells had total cyanide concentrations above the NYSDEC Groundwater Standard of 200 µg/L. Detected concentrations ranged from 236 µg/L at MW-23 to 874 µg/L at MW-20.
- August 2017: Five of the six wells had total cyanide concentrations above the NYSDEC Groundwater Standard of 200 µg/L. Detected concentrations ranged from 150 J+ µg/L at MW-13 to 1,000 µg/L J+ at MW-20.

Free cyanide was detected as summarized below; however, there is no NYSDEC Groundwater Standard for free cyanide:

- April 2017: Free cyanide was detected in one well (MW-22) at a concentration of 12 µg/L.
- August 2017: Free cyanide was detected in all six wells at concentrations ranging from 22.6 µg/L at MW-13 to 166 µg/L at MW-23.

Monitoring wells MW-13 and MW-23 are also sampled once annually during August for BTEX and PAHs. The BTEX compound benzene is regularly detected in MW-13. A summary of the BTEX and PAH analytical results from the August sampling event follows:

- August 2017:
    - BTEX compounds were not detected in either MW-13 or MW-23.
    - Naphthalene was detected at a concentration of 0.44 J µg/L in well MW-13 and 0.46 J µg/L in well MW-23, below the NYSDEC Groundwater Guidance Value of 10 µg/L.

On-site Purifier Residuals Impacted Areas

Wells MW-12 and MW-16 monitor groundwater quality at the Eastern Swale HDPE Cap (ESHC) and the CC, respectively. These are locations of known subsurface deposits of purifier box residuals. These deposits were remediated by capping. Samples from these two wells are analyzed for total and free cyanide.

As summarized below, both wells had total cyanide groundwater concentrations above the NYSDEC Groundwater Standard of 200 µg/L during each sampling event. A summary of exceedances follows:

- April 2017: Total cyanide concentrations were reported as 536 µg/L at MW-12 and 1,570 µg/L at MW-16.
- August 2017: Total cyanide concentrations were reported as 1,700 J- µg/L at MW-12 and 1,690 J+ µg/L at MW-16.

Free cyanide was detected as summarized below; however, there is no NYSDEC Groundwater Standard for free cyanide:

- April 2017: Free cyanide concentrations were reported as 6.8 µg/L at MW-12 and 17 µg/L at MW-16.
- August 2017: Free cyanide concentrations were reported as 7.2 µg/L at MW-12 and 38.8 µg/L at MW-16.

On-site Hydrocarbon Impacted Areas

Monitoring wells MW-07, MW-10, MW-11A, and MW-19 monitor on-site groundwater quality downgradient of subsurface soils impacted with hydrocarbon NAPL. Wells MW-07 and MW-10 are downgradient of the Separator Pits Excavation (SPE); well MW-11A is adjacent to the drainage ditch cap; and well MW-19 is downgradient of the Northern and Eastern Tar Boils Excavations. Samples from these wells are analyzed for BTEX and PAH compounds.

A summary of BTEX detections for wells MW-07, MW-10, MW-11A, and MW-19 follows:

- April 2017: In each well one or more BTEX compounds were detected above the respective NYSDEC Groundwater Standards.
- August 2017: One or more BTEX compounds were detected above the respective NYSDEC Groundwater Standards in each well at MW-07, MW-11A, and MW-19. BTEX compounds were not detected in well MW-10 during the August sampling event.

Only two PAH compounds were detected above NYSDEC Groundwater Guidance Values in the wells summarized below:

- April 2017: PAH compound acenaphthene was detected in MW-07 at a concentration of 100 µg/L, above the NYSDEC Groundwater Guidance Value of 20 µg/L. Naphthalene was detected in MW-07 and MW-19 at 2,300 µg/L and 6,200 µg/L, respectively, above the NYSDEC Groundwater Guidance Value of 10 µg/L.
- August 2017: PAH compound acenaphthene was detected in MW-07 at a concentration of 100 µg/L, above the NYSDEC Guidance Value of 20 µg/L. Naphthalene was detected in MW-07 and MW-19 at 2,300 µg/L and 4,400 µg/L, respectively, above the NYSDEC Guidance Value of 10 µg/L.

Surface Water

Two surface water samples, SW-01 and SW-02, are collected from the NYSDEC Class D Stream running along the south side of the site. Sample SW-01 is collected near the storm sewer inlet near Building 14 to monitor concentrations of COC in surface water downgradient of the Site. Sample SW-02 is collected at the EDD near the Class D Stream to monitor surface water downgradient of the EDD Cap. Surface water samples are analyzed for BTEX, PAH, total and free cyanide.
BTEX compounds were not detected in either surface water sample during either sampling event.
PAH compounds were not detected in either surface water sample during either sampling event.
A summary of total and free cyanide analytical results is presented below:

- April 2017:
    - Total cyanide was detected in the SW-01 surface water sample at a concentration of 25.5 µg/L and in the SW-02 surface water sample at a concentration of 253 µg/L, below the NYSDEC Class D Surface Water Standard of 9,000 µg/L.
    - Free cyanide was detected in the SW-01 surface water sample at a concentration of 11 µg/L and in the SW-02 surface water sample at a concentration of 72 µg/L. The free cyanide concentration in the SW-02 sample was above the NYSDEC Class D Surface Water Standard of 22 µg/L.

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- August 2017:
    - Total cyanide was detected in the SW-02 surface water sample at a concentration of 195 J+ µg/L, below the NYSDEC Class D Surface Water Standard of 9,000 µg/L. Total cyanide was not detected in the SW-01 surface water sample located downstream of SW-02.
    - Free cyanide was detected in the SW-02 surface water sample at a concentration of 24.6 µg/L, above the NYSDEC Class D Surface Water Standard of 22 µg/L. Free cyanide was not detected in the SW-01 surface water sample located downstream of SW-02.

Supplemental Groundwater and Surface Water

As summarized above, free cyanide was detected in the SW-02 surface water sample above the NYSDEC Class D Surface Water Standard during the April 2017 sampling round. In response to the free cyanide exceedance, supplemental groundwater and surface water samples were collected and analyzed for total cyanide, free cyanide, total dissolved solids (TDS), and specific conductance, as follows:

- Existing locations:
    - MW-11A: A groundwater sample was collected for total cyanide, free cyanide, and TDS analyses at MW-11A. Specific conductance is already a standard parameter for groundwater samples.
    - SW-01 and SW-02: A surface water sample for TDS and specific conductance analyses was collected at existing surface water sample locations SW-01 and SW-02. Total cyanide and free cyanide are already standard parameters for surface samples at these locations.
- Supplemental locations:
    - SW-03, SW-04, and SW-05: Surface water samples for total cyanide, free cyanide, TDS, and specific conductance analyses were collected at new surface water monitoring locations SW-03, SW-04, and SW-05.

Analytical results for the supplemental samples are summarized as follows:

Sample Location	Total Cyanide (µg/L)†	Free Cyanide (µg/L)†	TDS (mg/L)	Specific Conductivity (mS/cm)
MW-11A	175	5.9	766	1.144*
SW-01	ND*	ND*	608	1.013
SW-02	195*	24.6*	554	0.839
SW-03	422	25.3	644	0.957
SW-04	ND	ND	876	1.527
SW-05	ND	ND	615	1.036

Notes:
*Routine O&M Sample
TDS – total dissolved solids
µg/L – micrograms per liter
mg/L – milligrams per liter
mS/cm – millisiemens per centimeter
† Results are being evaluated for accuracy through the data validation and laboratory audit.

Total cyanide was detected in groundwater at monitoring well MW-11A below the NYSDEC Groundwater Standard of 200 µg/L. Total cyanide was detected in surface water samples SW-02 and SW-03 below the NYSDEC Class D Surface Water Standard of 9,000 µg/L. Total cyanide was not detected in the upstream surface water samples SW-04 or SW-05 or the downstream surface water sample SW-01.

Free cyanide was detected in groundwater at monitoring well MW-11A. There is not a NYSDEC Groundwater Standard for free cyanide in groundwater. Free cyanide was detected in surface water samples SW-02 and SW-03 above the NYSDEC Class D Surface Water Standard of 22 µg/L. Free cyanide was not detected in the upstream surface water samples SW-04 or SW-05 or the downstream surface water sample SW-01.

TDS and specific conductivity do not have a NYSDEC Groundwater or Surface Water Standard or Guidance Value.

4.2 Conclusions – 2017 Analytical Results

With the exception of the August 2017 total and free cyanide results, the results of routine O & M groundwater and surface water monitoring show that COC concentrations for this period are consistent with data collected since remediation was completed. Concentrations of free cyanide in groundwater in wells at the downgradient property boundary in April 2017 appeared to be stable. The analytical results for free cyanide in August 2017 are not consistent with the range of concentrations measured in past years and are being evaluated for accuracy through the data validation and laboratory audit. Concentrations of total cyanide in downgradient wells remain at levels higher than NYSDEC standards. National Fuel will continue to monitor the data.

4.3 Conclusions – August 2017 Supplemental Monitoring Results

The following conclusions were made from the supplemental groundwater and surface water monitoring conducted in August 2017:

- The concentration of total and free cyanide was observed to be greater in surface water (where detected, i.e. SW-02 and SW-03) than in groundwater at MW-11A.

  As stated above, the reported total and free cyanide results are being evaluated for accuracy through the data validation and laboratory audit. If warranted, additional supplemental sampling recommendations will be made following the completion of the data validation and audit. These recommendations will be proposed under separate cover.

- The groundwater elevation at monitoring well MW-11A was observed to be higher than the surface water elevation at location SW-02. Data collected show that there is a potential that a small, local groundwater mound may exist in the vicinity of monitoring well MW-11A (Figure 3).

- The TDS and specific conductivity results measured in the groundwater at MW-11A were similar to the values measured at the adjacent surface water location SW-02, as well as the other supplemental surface water locations, providing no definitive indication of influence to or from groundwater.

5. O&M Plan Compliance Report

The components of the O&M program for the Mineral Springs Site are established in the 2002 O&M Plan. These include groundwater and surface water monitoring, DNAPL recovery, annual inspections, maintenance and repair of engineering controls, and reporting. Details of this program

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are described in the O&M Plan and summarized in Table 1. Table 2, taken from the O&M Plan (with updated information), summarizes the groundwater and surface water monitoring program. O&M activities completed since the last PRR (dated October 14, 2016) include the following:

- Annual inspection on April 18, 2017.
- Groundwater and surface water monitoring events on April 18, 2017 and August 9 and 10, 2017.
- Continued evaluation of the DNAPL recovery well system with only trace amounts (estimated at less than 1%) of DNAPL observed in April 2017 and August 2017.
- Submittal of the Groundwater and Surface Water Monitoring Reports for the monitoring events performed in 2017.
- Performance of maintenance activities to address issues identified during the annual inspection.

During the April 2017 annual inspection, observations of site conditions were recorded. The inspection checklists are included as Appendix B. Photographs taken during the inspections are included in Appendix C, which also includes a photo location figure. An Institutional and Engineering Controls Certification Form is included in Appendix D.

5.1 2017 Annual Site Inspection

Clay Caps

Clay caps, designated CC on Figure 1, are located southeast of Building 14 and in the Eastern Drainage Ditch north of the northern culvert and south of the southern culvert, designated EDD.

As discussed previously, soil has been disturbed just beyond the southern edge of the CC southeast of Building 14 by the collapse of a storm sewer on adjacent property. A boring program performed as described in a Corrective Measure Work Plan determined the location of the clay cut-off wall and outer edge of the clay cap. Based on those borings, it was determined that the cut-off wall and clay cap are not in the area of soil disturbed by the damaged storm sewer, and both are intact. In April 2015, mechanical equipment was used to place stone in the area of the collapse to prevent any further loss of the overlying soils. During that work, the surface of the CC was disturbed. That area has since re-established a sufficient vegetative cover. This year's site inspection found that the engineering control is in place and effective.

The CC area has been mowed periodically to prevent tree growth. No blue-stained soils were observed during the inspection. The surface of the CC was intact and no sink holes were observed. An animal burrow was observed on the CC. The animal has been trapped and relocated, and the burrow has been filled.

In the clay-capped sections of the EDD, no erosion, animal burrows, or hydrocarbon sheen were observed. Warning signs were in place and no woody plants were observed near the clay portion of the cap.

HDPE Caps

Geomembrane caps, constructed of 40-mil HDPE and soil or stone cover, are located in the Eastern Swale and in the EDD between the culverts. These caps are designated ESHC and EDD cap, respectively.

The ESHC has been mowed periodically. No geotextile, rutting, or blue-stained surface soil were visible within the limits of the cap. A short length of corrugated drainage pipe is exposed within the

French drain portion of the ESHC, at the western end. The pipe is undamaged and its exposure does not impair the proper functioning of the ESHC. The pipe will be reset to proper grades.

The EDD cap includes an 18-inch diameter HDPE surface water drain pipe. There was no erosion, animal burrows, deep-rooted perennial plant species, or hydrocarbon sheen observed. The “no dig” signage was in place.

Asphalt Caps

Asphalt caps are located south and east of Building 3, designated B3SAC and B3EAC respectively; north and south of the Eastern Swale, designated ESNAC and ESSAC; to the north of Building 10, designated B10AC; and, west of Building 8, designated B8WAC.

One small area of significant cracking was observed in the B10AC and some areas of significant cracking were observed in the B3SAC. These areas have since been repaired and sealed since the inspection.

Other Areas

Throughout the remainder of the site, no tar boils or blue-stained soils were observed.

The compacted backfill placed in the various former Tar Boils and Separator Pit excavations has been maintained as necessary to assure run-off control. These areas showed no ponding of surface water.

No hydrocarbon sheens were observed in the Class D Stream or the EDD.

Groundwater and Surface Water Monitoring

Groundwater and surface water monitoring results for the April 2017 and August 2017 monitoring events are presented in the groundwater and surface water monitoring reports, prepared by AECOM and submitted to NYSDEC on May 31, 2017 and October 27, 2017, respectively. A summary of groundwater and surface water analytical results for the period between August 1995 and August 2017 is tabulated in Appendix A. Sampling locations are shown on Figures 2 and 3 for the April 2017 and August 2017 monitoring event, respectively. Discussions of the 2017 monitoring results for specific areas of the Site have been presented in Section 4 of this report.

5.2 Conclusions

Since the last PRR, O&M activities have been performed at the Site as specified in the O&M Plan. The deficiencies identified in the annual inspection have been addressed. Engineering controls are intact, and the combination of institutional and engineering controls are effective. Institutional and engineering controls implemented during past remedial actions are in place and effective.

With the exception of the August 2017 total and free cyanide results, the results of routine O & M groundwater and surface water monitoring show that COC concentrations for this period are consistent with data collected since remediation was completed. Concentrations of free cyanide in groundwater in wells at the downgradient property boundary in April 2017 appeared to be consistent with historical values. The analytical results for free cyanide in August 2017 are not consistent with the range of concentrations measured in past years and are being evaluated for accuracy through the data validation and laboratory audit. Concentrations of total cyanide in downgradient wells remain at concentrations higher than NYSDEC standards. National Fuel will continue to monitor the data.

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6. Overall PRR Conclusions and Recommendations

As discussed above, the O&M program is being implemented in accordance with the provisions of the Site O&M Plan. The results of the site inspection indicate that the combination of institutional and engineering controls remain intact and continue to be effective in meeting remedial objectives.

With the exception of the August 2017 total and free cyanide results, the results of routine O & M groundwater and surface water monitoring show that COC concentrations for this period are consistent with data collected since remediation was completed. Concentrations of free cyanide in groundwater in wells at the downgradient property boundary in April 2017 were consistent with historic concentrations. The analytical results for free cyanide in August 2017 are not consistent with the range of concentrations measured in past years and are being evaluated for accuracy through the data validation and laboratory audit. Concentrations of total cyanide in downgradient wells remain at levels higher than NYSDEC standards. National Fuel will continue to monitor the data.

The results of the supplemental groundwater and surface water monitoring completed during the August 2017 monitoring event show the following:

- The concentration of total and free cyanide was observed to be greater in surface water (where detected, i.e., SW-02 and SW-03) than in groundwater at MW-11A.

  As stated above, the reported total and free cyanide results are being evaluated for accuracy through the data validation and laboratory audit. Results of the data validation and laboratory audit will be presented under separate cover. If warranted, based on the results of the data validation and laboratory audit, additional supplemental sampling recommendations will subsequently be proposed.

- The groundwater elevation at monitoring well MW-11A was observed to be higher than the surface water elevation at location SW-02. Data collected show that there is a potential that a small, local groundwater mound may exist in the vicinity of monitoring well MW-11A, and that the Class D stream may be a gaining surface water body at the time the water elevation measurements were taken (Figure 3).

- The TDS and specific conductivity results measured in the groundwater at MW-11A were similar to the values measured at the adjacent surface water location SW-02, as well as the other supplemental surface water locations (SW-03, SW-04, and SW-05) located upstream, providing no definitive indication of influence to or from groundwater.

Please do not hesitate to call me with questions at 716-923-1222.

Sincerely yours,

Randolph West, P.E.
Senior Engineer

AECOM

cc: B. Walker – National Fuel
T. Alexander – National Fuel (electronic submittal)
S. McLaughlin – NYSDOH (electronic submittal)
R. Jones – NYSDOH Project Manager (electronic submittal)
C. Bethoney – NYSDOH Region 9 Chief (electronic submittal)
T. Raby – AECOM

Tables

Table 1
Operations, Maintenance, and Monitoring Scope of Work
Mineral Springs Former MGP Site

	Frequency	Description	Notes
Groundwater and Surface Water Monitoring	Twice a year	Groundwater and surface water monitoring as specified in Table 2. Monitoring typically takes place in April and August.	Scope in 2002 included monitoring three times a year. The frequency was modified in 2005 with NYSDEC approval.
DNAPL Recovery Test Well	Twice a year	DNAPL recovery from well RTW-1.	Continuous operations of RTW-1 were halted in 2002 with NYSDEC approval since only de minimis amount of DNAPL was being recovered.
Site Inspections	Annual	Inspection of the following: • Clay, geomembrane, and asphalt caps • Ground surface for signs of tar or purifier residues • Fencing • Stream	
Maintenance and Repair	As needed	Activities determined based on inspection results	
Reporting	Twice a year	Groundwater Monitoring Report	
	Annually	O&M Report	As of October 2011, a Periodic Review Report (PRR) is submitted annually to meet current NYSDEC requirements.

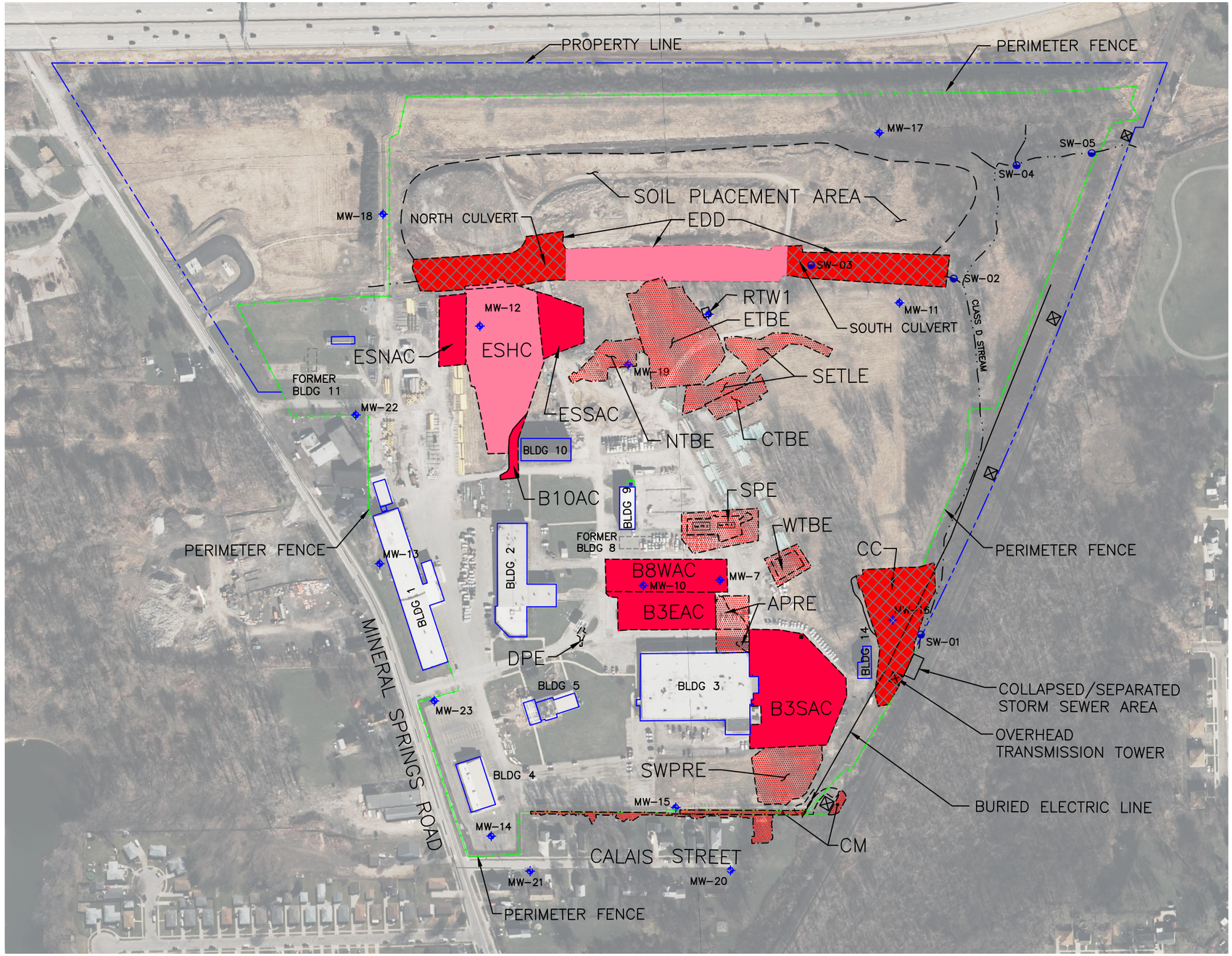
Table 2
Water Sampling Summary Table[1]
Mineral Springs Road MGP Site, 2017

Location	Cyanide, Total USEPA SW846 9014	Cyanide, Free USEPA SW846 9016	BTEX USEPA SW846 8260C	PAHs USEPA SW846 8270D	TDS SM 2540C	Specific Conductivity Field Measurement	Water Elevation	Benchmark Elevation (ft. MSL, top of PVC casing)
Upgradient Site Perimeter								
MW-17	x	x	x	x		x	x	587.28
Downgradient Site Perimeter								
MW-13	x	x	x	x		x	x	591.85
MW-14	x	x				x	x	589.53
MW-15							x	590.93
MW-20	x	x				x	x	587.06
MW-21	x	x				x	x	587.84
MW-22	x	x				x	x	592.50
MW-23	x	x	x	x		x	x	589.28
Onsite Purifier Residuals Impacted Areas								
MW-12	x	x				x	x	591.40
MW-16	x	x				x	x	588.99
Onsite Hydrocarbon Impacted Areas								
MW-07			x	x		x	x	587.01
MW-10			x	x		x	x	587.61
MW-11A [2]	x [2]	x [2]	x	x	x [2]	x	x	589.78
MW-19			x	x		x	x	589.83
Onsite Surface Water								
SW-01 [2]	x	x	x	x	x [2]	x [2]	x	top of headwall = 587.0
SW-02 [2]	x	x	x	x	x [2]	x [2]	x [2]	MW-11A ref. pt
SW-03 [2]	x [2]	x [2]			x [2]	x [2]		
SW-04 [2]	x [2]	x [2]			x [2]	x [2]		
SW-05 [2]	x [2]	x [2]			x [2]	x [2]		
QA/QC Samples (frequency)								
Trip Blank			x					(one per shipment)
Field Duplicate	x	x	x	x				(one per event)
Equipment Blank	x	x	x	x				(one per event)
DNAPL Recovery								
RTW-1								(purge well of accumulated DNAPL)
Total	17	17	12	11	6	18	16	
Container, Preservative	250 mL plastic, NaOH	250 mL plastic amber, NaOH	40 mL VOA vial, HCl (x3)	250 mL glass amber, NP (x2)	500 mL plastic, unpreserved			

Notes:

1. Sample methods and containers have been updated to the most current information. Benchmark elevations have been updated to reflect the 2007 survey, except for MW-20, which was resurveyed in August 2009 due to a repair.
2. Supplemental sampling at this location was conducted in August 2017.

Figures



150 0 300

GRAPHIC SCALE IN FEET

LEGEND

	EXISTING STRUCTURE
	REMEDIAL CONSTRUCTION
	FORMER STRUCTURE
	EXISTING EXCAVATION LIMITS
MW-7	MONITORING WELLS
SW-01	SURFACE WATER SAMPLE LOCATION
APRE	ADDITIONAL PURIFIER RESIDUALS EXCAVATION
B3EAC	BUILDING 3 EAST ASPHALT CAP
B3SAC	BUILDING 3 SOUTH ASPHALT CAP
B8WAC	BUILDING 8 WEST ASPHALT CAP
B10AC	BUILDING 10 ASPHALT CAP
CC	CLAY CAP
CM	CORRECTIVE MEASURE WEST PROPERTY LINE
CTBE	CENTRAL TAR BOILS EXCAVATION
DPE	DIESEL PAD EXCAVATION
EDD	EASTERN DRAINAGE DITCH
ESHC	EASTERN SWALE HDPE CAP
ESNAC	EASTERN SWALE NORTH ASPHALT CAP
ESSAC	EASTERN SWALE SOUTH ASPHALT CAP
ETBE	EASTERN TAR BOILS EXCAVATION
NTBE	NORTHERN TAR BOILS EXCAVATION
RTW1	RECOVERY TEST WELL AND DNAPL SHED
SETLE	SOUTHEASTERN TAR LENSES EXCAVATION
SPE	SEPARATOR PITS EXCAVATION
SWPRE	SOUTHWEST RESIDUALS EXCAVATION
WTBE	WESTERN TAR BOILS EXCAVATION
	CLAY CAP
	ASPHALT CAP
	HDPE CAP
	REMEDIAL EXCAVATION

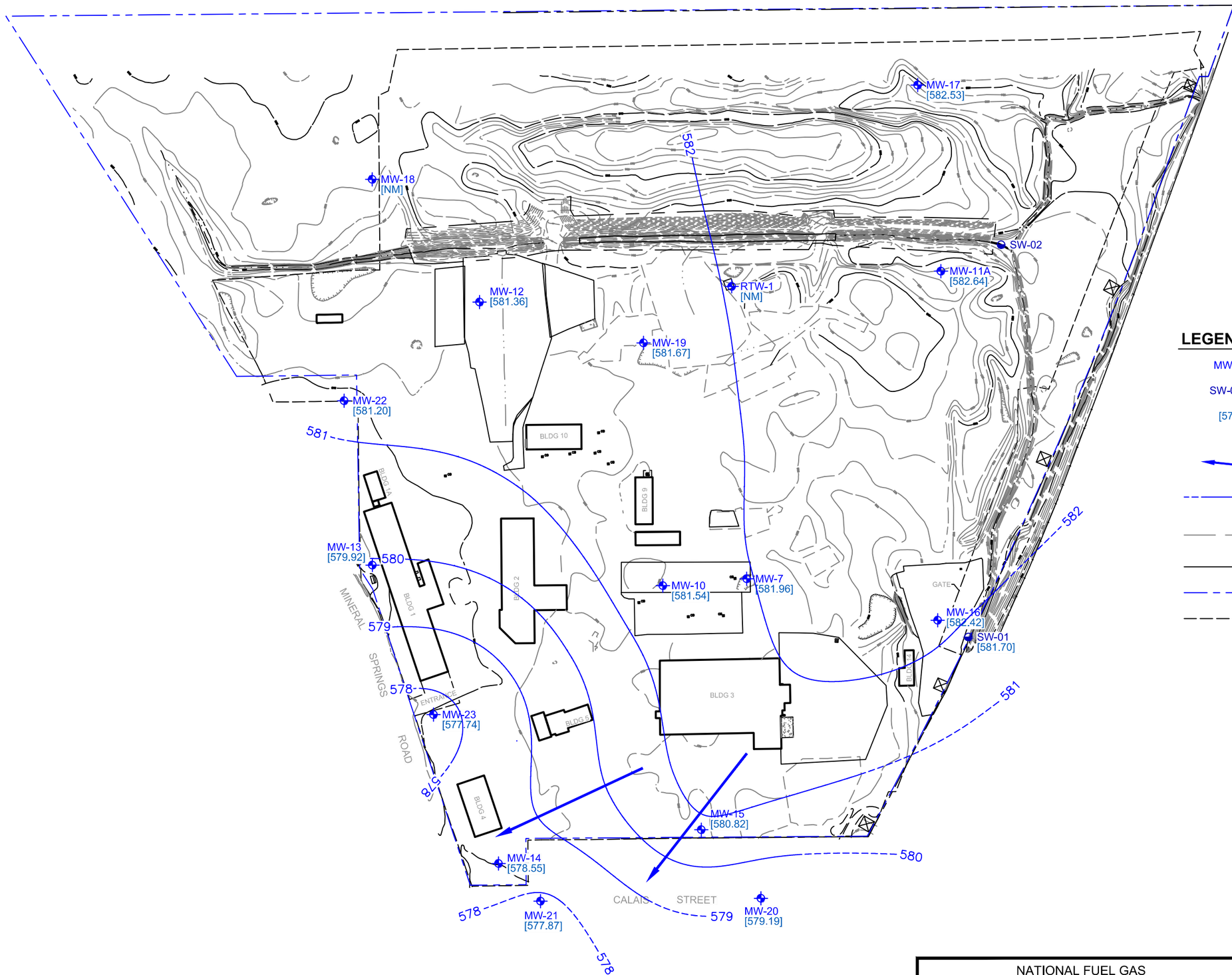
PREVIOUSLY REMEDIATED AREAS ARE SHADED RED

AECOM

MINERAL SPRINGS ROAD FACILITY
NATIONAL FUEL GAS
60538249-100

SITE FIGURE

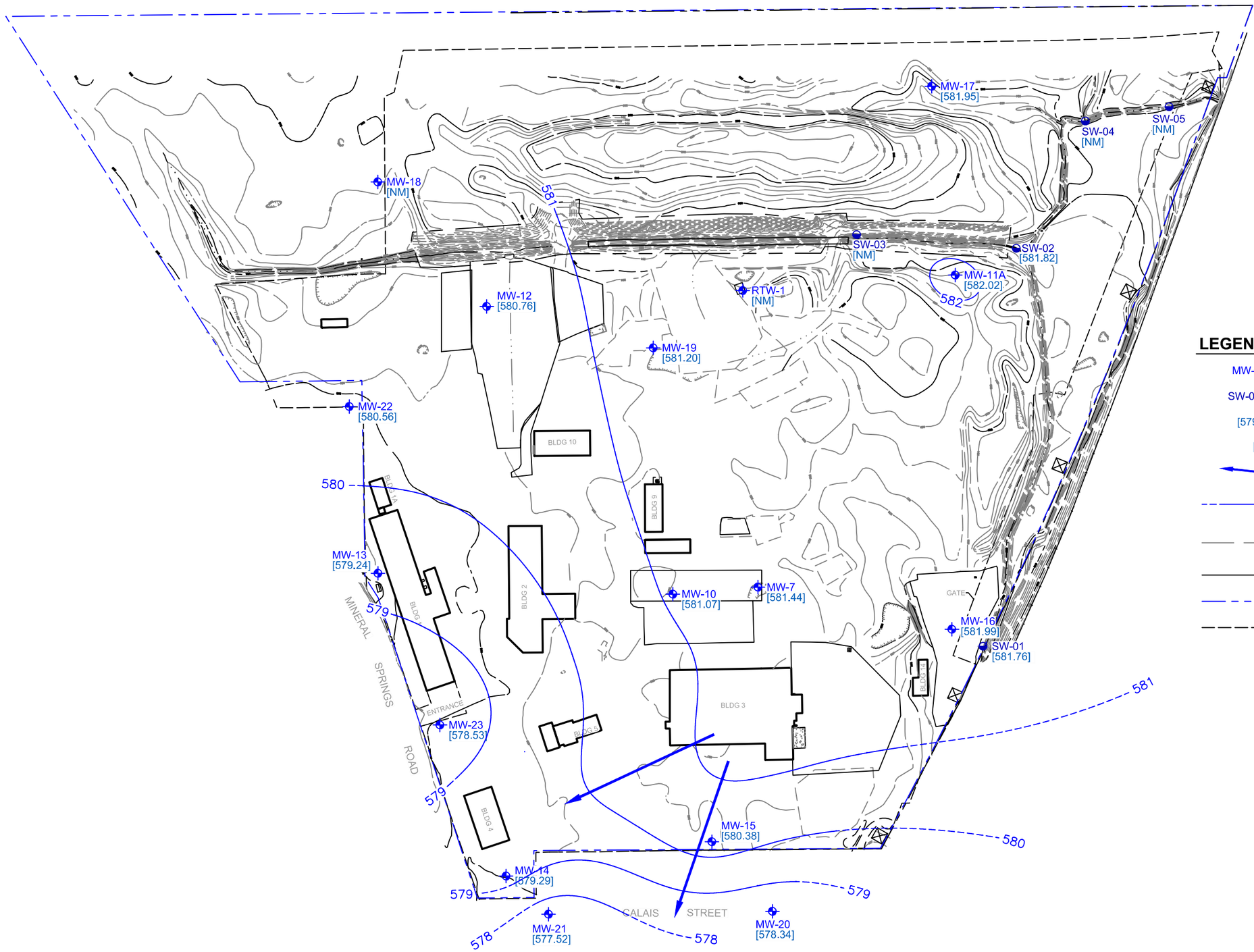
DATE: 6/23/15 | DRWN: GRI | **FIGURE 1**



AECOM

NATIONAL FUEL GAS MINERAL SPRINGS ROAD MGP SITE 60538249-100			**GROUNDWATER ELEVATION CONTOURS APRIL 2017**
DATE: 04/2017	DRWN: HAP		**FIGURE 2**

File: C:\0-tanvi\FOR REPORT\60538249_100 FIGURE 2 GW _APR2017.dwg Layout: GW-2017-04 User: heather.pressing Plotted: Sep 29, 2017 - 3:23pm Xref's:



AECOM

NATIONAL FUEL GAS MINERAL SPRINGS ROAD MGP SITE 60538249-100			**GROUNDWATER ELEVATION CONTOURS AUGUST 2017**
DATE: 08/09/2017	DRWN: HAP		**FIGURE 3**

File: C:\0-tanv\FOR REPORT\60538249_100 FIGURE 3 GW_AUG2017.dwg Layout: GW-2017-08 User: heather.pressing Plotted: Sep 29, 2017 – 3:24pm Xref's:

Appendix A

Groundwater and Surface Water Monitoring Results

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene	3320	1210	4900		5100	5200	4800	3900	3300	2700	2200	3000	2100	1900	3200	2800	2000	1700	2800	2000	2900	2600	2000	1900	490	1100	780	850	330	840	690	600	690	420	660	450	620	570	1,100	1,100	660	1,100	710	1,100
Toluene	389	20	750		2000	2700	2500	3400	1700	1500	1200	1400	1200	930	1700	1800	1300	930	1100	840	1100	570	620	100	270	590	420	250	96	44	210	37	77	6.9	210	9.2	94	14	110	30	32	14	36	39
Ethylbenzene	2400	410	2900		3700	3600	3300	2000	2100	2300	1900	2200	1900	1900	2700	2500	2500	1800	2700	2200	3100	2500	2500	2000	410	1500	1100	1000	520	1200	1200	800	1000	470	1000	600	1800	870	1,900	1,600	1,100	1,300	1,000	1,600
Xylene (sum of isomers)	1038	63	1200		1800	1900	1800	1600	1100	1200	1100	1100	1100	1000	1400	1200	1400	1000	1600	1300	1800	1500	1400	1100	270	910	820	700	360	820	770	510	660	270	680	440	980	590	1,400	1,200	660	780	650	940
Total BTEX	7147	1703	9750		12600	13400	12400	10900	8200	7700	6400	7700	6300	5730	9000	8300	7200	5430	8200	6340	8900	7170	6520	5100	1440	4100	3120	2800	1,306	2,904	2,870	1,947	2,427	1,167	2,550	1,499	3,494	2,044	4,510	3,930	2,452	3,194	2,396	3,679
Acenaphthene	240	150	180		180	180	150	140	160	80	120	150	nd	160	120	160	180	160	130	220	120	130	nd	130	19	69	32	36	15	60	76	49	64	49	64	63	100	74	130	120	93	78	100	100
Acenaphthylene	nd	nd	nd		nd	nd	nd	2.2	nd	nd	nd	nd	nd	nd	nd	nd	3	nd	nd	nd	nd	nd	nd	nd	2.5	nd	0.63	nd	nd	nd	nd	nd	nd	2.0	0.83	nd	nd	nd	nd	nd	nd	nd	nd	nd
Anthracene	nd	nd	nd		nd	nd	nd	3.6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5.4	3.9	nd	3	2.5	1.5	nd	nd	0.23	1.4	nd	0.98	1.5	1.3	1.6	1.7	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Chrysene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.47	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluoranthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.2	0.27	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluorene	nd	28	45		nd	nd	nd	28	nd	nd	nd	33	nd	nd	27	nd	42	nd	24	46	32	24	nd	25	7.6	13	6.4	6.2	2.7	12	13	9.6	11	11	13	12	nd	nd	nd	nd	nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Naphthalene	3270	3000	2400		4100	5900	3400	3400	3600	2200	2600	5000	3100	3800	3200	3700	2700	4600	3500	3600	3000	3600	3700	3100	430	1000	1600	1400	650	1700	2100	1500	1700	870	1,700	1,100	2,500	1,600	3,400	3,000	2,200	1,600	2,300	2,300
Phenanthrene	nd	nd	37		nd	nd	nd	32	nd	nd	nd	30	nd	nd	nd	nd	38	nd	nd	nd	33	28	nd	25	2.5	12	4.3	4.6	2.1	11	16	9.5	11	9.1	12	11	nd	nd	nd	nd	nd	nd	nd	nd	nd
Pyrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.28	nd	nd	nd	0.17	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene							180	190	200	100	180	230	nd	280	170	270	320	300	230	400	350	250	270	230	24	120	73	84	33	110	160	90	120	66	130	82	260	110	300	250	170	120	190	190
Total PAHs	3510	3178	2662		4280	6080	3730	3796	3960	2380	2900	5443	3100	4240	3517	4130	3283	5060	3884	4266	3541	4036	3970	3513	488	1215.5	1684.33	1495	688.23	1834.95	2365	1610.08	1843.5	1006.57	1,922.6	1,270.53	2,860	1,784	3,830	3,370	2,463	1,798	2,590	2,590
Cyanide, total (Exygen/ Test America)			189																																									
Cyanide, total (Clarkson Univ.)																																												
Cyanide, free (Exygen/ Test America)																																												
Cyanide, free (Clarkson Univ.)																																												
Water Elevation (feet)			580.13	581.68	579.84	581.70	581.50	579.98	580.58	582.01	580.96	580.26	581.66	580.31	580.32	582.45	581.24	581.36	582.28	579.76	581.90	579.24	582.58	578.21	581.99	580.83	581.93	581.01	582.26	580.00	583.60	579.76	581.56	578.61	582.22	581.02	582.41	579.61	582.17	580.15	582.36	578.09	581.96	581.44

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	1.2	nd	nd	nd	nd	nd	0.83	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Toluene	nd	nd	nd		nd	nd	nd	nd	nd	0.89	nd	nd	0.81	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	0.9	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.0	nd	nd	nd	nd	nd	nd	nd	nd
Xylene (sum of isomers)	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.66	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Total BTEX	0	0	0		0	0	0	0	0	0.89	0	0	2.91	0	0	0	0	0	0.83	0	0	0	0	1.96	0	0	0	0	0	0	0	0	0	0	0	1.0	0	0	0	0	0	0	0	0
Acenaphthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Acenaphthylene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Anthracene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.27	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.18	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.28	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Chrysene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.41	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluoranthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.77	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.34	nd	nd	nd
Fluorene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.35	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Naphthalene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	2.1	nd	nd	nd	nd	nd	nd	0.78	nd	43	nd	2.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.65	2.2	nd	nd	1.0	1.6	0.91	0.68	nd
Phenanthrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.69	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Pyrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.53	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene							nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	3.8	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Total PAHs	0	0	0		0	0	0	0	0	0	0	2.1	0	0	0	0	0	0	0.78	0	46.8	0	2.3	0	0	0	0	1.31	2.17	0	0	0	0	0.65	2.2	0	0	1.0	1.6	0.9	0.68	0
Cyanide, total (Exygen/ Test America)			334																																								
Cyanide, total (Clarkson Univ.)																																											
Cyanide, free (Exygen/ Test America)																																											
Cyanide, free (Clarkson Univ.)																																											
Water Elevation (feet)			579.87	581.44	579.33	581.19	581.07	579.64	580.10	581.61	580.51	579.51	581.23	579.93	579.16	581.92	580.80	580.90	581.78	579.53	581.15	580.04	582.06	578.19	581.51	580.45	581.10	580.82	580.49	580.56	583.39	579.53	581.05	579.85	581.63	580.40	581.76	579.31	581.64	580.15	581.81	578.29	581.54	581.07
Notes:																																											
nd - non-detect																																											
open space - no data																																											

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

MW-11 / MW-11A	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11A
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Apr-17
Benzene			35		nd	nd	nd	nd		nd	nd	nd	nd	350	80	50	270	150	140	250	67	140	100	180	230	210	190	200	77	150	15	170	31	85	20	32	nd	7.3	nd	12	8.8	44	12	11
Toluene			17		nd	nd	nd	68		nd	3.8	nd	nd	230	1.2	0.7	35	nd	1.2	7	0.56	1.2	0.99	nd	5.5	nd	nd	nd	0.78	1.9	nd	nd	nd	1.4	nd	nd	nd	nd	nd	nd	nd	0.74	1	nd
Ethylbenzene			94		nd	nd	nd	nd		nd	nd	nd	nd	650	3.5	6.9	30	5.4	9.6	38	2.5	8.7	2.8	5.5	69	71	67	80	35	56	5.7	63	7.1	34	7.3	5.7	nd	nd	nd	nd	nd	2.3	0.34	nd
Xylene (sum of isomers)			83		7	nd	nd	nd		nd	nd	nd	nd	410	9.1	9.2	38	16	16	30	8.1	14	5.5	29	41	30	24	28	21	27	3.5	25	4.3	15	5.4	4.6	nd	nd	nd	1.4	nd	2	0.77	nd
Total BTEX			229		7	0	0	68		0	4	0	0	1640	94	67	373	171	167	325	78	164	109	215	346	311	281	308	133.78	234.9	24.2	258	42.4	135.4	32.7	42.3	0	7.3	0	13.4	8.8	49.04	14.11	11
Acenaphthylene			9		2	nd	nd	nd		nd	nd	nd	nd	12	8.4	nd	7.9	9.4	2.8	8.9	5.1	nd	5.8	0.93	6.9	3.4	3.7	4.6	2.4	3.8	0.72	2.8	1.3	2.2	2.9	4.7	nd	4	nd	3.4	2.9	3.3	2.6	2.8
Acenaphthene			7		nd	nd	nd	nd		nd	nd	nd	nd	4.4	3.1	1.2	4.5	5.9	4.5	5.6	nd	nd	nd	2.7	5.6	5	4.1	6.1	3.1	5.1	2.6	4.6	2.0	3.8	1.4	2.1	nd	2.0	nd	1.8	1.7	2.0	1.5	1.4
Anthracene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	0.5	1.6	nd	nd	nd	nd	nd	nd	2.2	nd	nd	nd	nd	0.3	0.24	nd	nd	nd	nd	0.43	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Chrysene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluoranthene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	0.3	nd	nd	nd	nd	0.57	nd	nd	0.32	0.52	0.24	0.51	0.45	0.42	nd	0.40	0.36	0.95	nd	nd	nd	0.70	nd	0.48	nd	0.67
Fluorene			nd		nd	nd	nd	nd		nd	nd	nd	nd	2.2	nd	nd	1.9	2.3	1.3	1.7	1.5	nd	nd	nd	5.1	0.86	0.89	1.6	0.72	1.2	0.83	nd	nd	0.91	0.52	1.4	nd	0.73	nd	0.64	0.6	0.53	0.46	0.49
Indeno(1,2,3-cd)Pyrene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Naphthalene			140		12	nd	nd	nd		nd	nd	nd	nd	150	130	nd	39	31	nd	20	2.9	nd	nd	0.79	7.1	2.5	4.1	9.3	0.78	2.6	0.28	4	nd	0.81	0.29	0.57	0.6	nd	1.4	1.20	nd	nd	nd	0.74
Phenanthrene			nd		nd	nd	nd	nd		nd	nd	nd	nd	2.7	2.2	nd	3.7	6.4	nd	2	nd	nd	nd	nd	1.5	nd	nd	2.8	nd	0.56	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Pyrene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	0.3	0.73	0.46	0.33	nd	nd	nd	1.2	nd	nd	0.36	0.75	0.27	0.52	0.71	0.56	nd	0.51	0.58	1.3	nd	1	nd	1	0.66	0.73	0.63	0.96
2-Methylnaphthalene							nd	nd		nd	nd	nd	nd	31	4.4	nd	0.26	nd	nd	0.15	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Total PAHs			156		14	0	0	0		0	0	0	0	202	148	1	58	57	9	39	10	0	6	6	28	11.76	13.47	25.67	7.51	14.59	5.83	12.38	3.3	8.63	6.05	11.45	0.64	7.73	1.40	8.74	5.86	7.04	5.19	7.06
Cyanide, total (Exygen/ Test America)			1040						1340																																			175
Cyanide, total (Clarkson Univ.)																																											
Cyanide, free (Exygen/ Test America)									nd																																		5.9
Cyanide, free (Clarkson Univ.)																																										
Water Elevation (feet)			580.28	582.26	579.82	583.55	583.85	579.28	581.30	583.85	581.32	581.03	582.97	580.70	581.11	583.03	581.54	581.87	582.74	580.09	582.38	580.78	583.07	578.46	582.43	581.32	582.35	581.46	582.85	580.37	584.05	580.22	582.07	579.02	582.78	580.94	582.98	579.83	582.74	580.63	583.03	578.48	582.64	582.02

Notes:

nd - non-detect

open space - no data

(All Units in μg/L)

MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05
Benzene			17																
Toluene			nd																
Ethylbenzene			nd																
Xylene (sum of isomers)			nd																
Total BTEX			17																
Acenaphthylene			nd																
Acenaphthene			nd																
Anthracene			nd																
Benzo(a)Anthracene			nd																
Benzo(a)Pyrene			nd																
Benzo(b)Fluoranthene			nd																
Benzo(g,h,i)Perylene			nd																
Benzo(k)Fluoranthene			nd																
Chrysene			nd																
Dibenzo(a,h)Anthracene			nd																
Fluoranthene			nd																
Fluorene			nd																
Indeno(1,2,3-cd)Pyrene			nd																
Naphthalene			nd																
Phenanthrene			nd																
Pyrene			nd																
2-Methylnaphthalene																			
Total PAHs			0																
Cyanide, total (Exygen/ Test America)			375		294	380	434	1840	393	522	2020	438	440	384	437	134	458	514	2110
Cyanide, total (Clarkson Univ.)																	461	491	425
Cyanide, free (Exygen/ Test America)						nd	nd	nd	nd	nd	58	7	nd	88	57	19	6	5	817
Cyanide, free (Clarkson Univ.)																6.7	nd	nd	3.3
Water Elevation (feet)			579.45	581.07	578.98	580.90	580.72	579.30	579.54	581.40	580.30	579.29	580.82	579.59	579.75	581.55	580.39	580.51	581.48

MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12
DATE	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene																									
Toluene																									
Ethylbenzene																									
Xylene (sum of isomers)																									
Total BTEX																									
Acenaphthylene																									
Acenaphthene																									
Anthracene																									
Benzo(a)Anthracene																									
Benzo(a)Pyrene																									
Benzo(b)Fluoranthene																									
Benzo(g,h,i)Perylene																									
Benzo(k)Fluoranthene																									
Chrysene																									
Dibenzo(a,h)Anthracene																									
Fluoranthene																									
Fluorene																									
Indeno(1,2,3-cd)Pyrene																									
Naphthalene																									
Phenanthrene																									
Pyrene																									
2-Methylnaphthalene																									
Total PAHs																									
Cyanide, total (Exygen/ Test America)											708	837	720	670	480	530	540	526	580	570	890	640	790	536	1,700
Cyanide, total (Clarkson Univ.)	413	440	415	459	454	473	550	472	449	550															
Cyanide, free (Exygen/ Test America)											6.0	7.0	nd	10	23	10	14	7.5	10	nd	9	6	nd	6.8	7.2
Cyanide, free (Clarkson Univ.)	2.9	2.6	nd	nd	6.8	25	7.2	4.1	4.7	nd															
Water Elevation (feet)	579.27	580.96	579.78	581.88	578.7	581.25	580.16	581.10	580.35	581.45	579.50	583.27	579.21	580.82	578.49	581.40	579.87	581.69	579.87	581.34	579.87	581.62	578.08	581.36	580.76

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene			4	nd								1.8			3.7			1.2				1.9		2.1	nd			1		0.44		0.72		1.6		2.8		1.3		0.91		1.8		nd
Toluene			nd	nd								nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Ethylbenzene			nd	nd								nd			nd			nd				nd		0.38	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Xylene (sum of isomers)			nd	nd								nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Total BTEX			4	0								1.8			3.7			1.2				1.9		2.48	0			1		0.44		0.72		1.6		2.8		1.3		0.91		1.8		0
Acenaphthene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Acenaphthylene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Anthracene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Benzo(a)Anthracene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Benzo(a)Pyrene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Benzo(b)Fluoranthene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Benzo(g,h,i)Perylene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Benzo(k)Fluoranthene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Chrysene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Dibenzo(a,h)Anthracene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Fluoranthene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Fluorene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Indeno(1,2,3-cd)Pyrene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Naphthalene			nd									nd			nd			nd				2.8		0.88	nd			nd		nd		nd		nd		nd		nd		nd		nd		0.44
Phenanthrene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Pyrene			nd									nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
2-Methylnaphthalene												nd			nd			nd				nd		nd	nd			nd		nd		nd		nd		nd		nd		nd		nd		nd
Total PAHs			0									0			0			0				2.8		0.88	0			0		0		0		0		0		0		0		0		0.44
Cyanide, total (Exygen/ Test America)			323		356	280	129	465	716	nd	157	399	142	423	528	175	108	280	103											449	nd	620	10	670	nd	530	nd	500	nd	400	nd	400	nd	150
Cyanide, total (Clarkson Univ.)																	145	234	55	363	61	300	3	664	54	467	27	327	nd															
Cyanide, free (Exygen/ Test America)						nd	33	119	nd	nd	96	13	nd	51	22	22	nd	nd	45											nd	nd	nd	0.87	21	nd	5.7	nd	nd	nd	7.4	nd	nd	nd	22.6
Cyanide, free (Clarkson Univ.)																5.3	nd	nd	nd	3	nd	nd	nd	5.3	2.3	8.2	nd	nd	nd															
Water Elevation (feet)			578.17	579.72	577.70	579.47	579.28	577.91	578.23	579.90	578.80	577.83	579.23	578.13	578.18	579.78	578.69	578.80	579.87	577.95	579.42	578.30	580.29	577.3	579.65	578.95	579.44	578.59	579.65	578.10	581.97	577.73	579.09	577.19	579.74	578.43	580.29	577.85	578.53	578.35	578.35	577.12	579.98	579.24

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05
Benzene			nd																
Toluene			nd																
Ethylbenzene			nd																
Xylene (sum of isomers)			nd																
Total BTEX			0																
Acenaphthene			nd																
Acenaphthylene			nd																
Anthracene			nd																
Benzo(a)Anthracene			nd																
Benzo(a)Pyrene			nd																
Benzo(b)Fluoranthene			nd																
Benzo(g,h,i)Perylene			nd																
Benzo(k)Fluoranthene			nd																
Chrysene			nd																
Dibenzo(a,h)Anthracene			nd																
Fluoranthene			nd																
Fluorene			nd																
Indeno(1,2,3-cd)Pyrene			nd																
Naphthalene			nd																
Phenanthrene			nd																
Pyrene			nd																
2-Methylnaphthalene																			
Total PAHs			0																
Cyanide, total (Exygen/ Test America)			644		427	800	914	378	449	886	416	487	664	962	583	nd	503	537	
Cyanide, total (Clarkson Univ.)																	514	571	
Cyanide, free (Exygen/ Test America)						nd	nd	nd	nd	nd	17	12	nd	9	7	nd	14	13	
Cyanide, free (Clarkson Univ.)																nd	nd	nd	
Water Elevation (feet)			577.36	579.19	577.03	578.44	578.21	577.21	577.31	578.56	577.61	576.76	577.92	577.23	577.11	578.15	577.55	577.46	

MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14
DATE	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene																									
Toluene																									
Ethylbenzene																									
Xylene (sum of isomers)																									
Total BTEX																									
Acenaphthene																									
Acenaphthylene																									
Anthracene																									
Benzo(a)Anthracene																									
Benzo(a)Pyrene																									
Benzo(b)Fluoranthene																									
Benzo(g,h,i)Perylene																									
Benzo(k)Fluoranthene																									
Chrysene																									
Dibenzo(a,h)Anthracene																									
Fluoranthene																									
Fluorene																									
Indeno(1,2,3-cd)Pyrene																									
Naphthalene																									
Phenanthrene																									
Pyrene																									
2-Methylnaphthalene																									
Total PAHs																									
Cyanide, total (Exygen/ Test America)											541	623	670	610	610	640	600	610	720	610	740	240	560	508	578
Cyanide, total (Clarkson Univ.)	423	305	281	404	422	374	486	425	422	480															
Cyanide, free (Exygen/ Test America)											nd	nd	nd	1.7	nd	nd	nd	nd	nd	nd	5.7	nd	nd	nd	38.9
Cyanide, free (Clarkson Univ.)	nd	nd	nd	nd	nd	4	2.5	4.1	nd	nd															
Water Elevation (feet)	577.07	577.99	577.29	577.89	577.43	577.87	576.48	577.57	577.15	578.05	577.27	579.98	577.05	577.85	576.63	578.43	577.55	578.66	577.73	577.85	577.63	578.74	576.87	578.55	579.29

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene			nd																																									
Toluene			nd																																									
Ethylbenzene			nd																																									
Xylene (sum of isomers)			nd																																									
Total BTEX			0																																									
Naphthalene			nd																																									
Acenaphthylene			nd																																									
Acenaphthene			nd																																									
Fluorene			nd																																									
Phenanthrene			nd																																									
Anthracene			nd																																									
Fluoranthene			nd																																									
Pyrene			nd																																									
Benzo(a)Anthracene			nd																																									
Chrysene			nd																																									
Benzo(b)Fluoranthene			nd																																									
Benzo(k)Fluoranthene			nd																																									
Benzo(a)Pyrene			nd																																									
Indeno(1,2,3-cd)Pyrene			nd																																									
Dibenzo(a,h)Anthracene			nd																																									
Benzo(g,h,i)Perylene			nd																																									
2-Methylnaphthalene																																												
Total PAHs			0																																									
Cyanide, total (Exygen/ Test America)			78.8																																									
Cyanide, total (Clarkson Univ.)																																												
Cyanide, free (Exygen/ Test America)																																												
Cyanide, free (Clarkson Univ.)																																												
Water Elevation (feet)			579.11	579.81	578.70	580.15	580.55	578.98	579.49	580.98	579.48	578.88	580.40	579.11	579.30	581.04	579.99	---	580.54	579.45	580.54	579.36	---	577.89	580.60	579.65	580.61	579.65	580.87	579.18	582.58	578.76	NM	576.28	580.93	579.55	581.18	578.77	580.85	579.34	581.1	577.9	580.82	580.38

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene			nd																																								
Toluene			nd																																								
Ethylbenzene			nd																																								
Xylene (sum of isomers)			nd																																								
Total BTEX			0																																								
Naphthalene			nd																																								
Acenaphthylene			nd																																								
Acenaphthene			nd																																								
Fluorene			nd																																								
Phenanthrene			nd																																								
Anthracene			nd																																								
Fluoranthene			nd																																								
Pyrene			nd																																								
Benzo(a)Anthracene			nd																																								
Chrysene			nd																																								
Benzo(b)Fluoranthene			nd																																								
Benzo(k)Fluoranthene			nd																																								
Benzo(a)Pyrene			nd																																								
Indeno(1,2,3-cd)Pyrene			nd																																								
Dibenzo(a,h)Anthracene			nd																																								
Benzo(g,h,i)Perylene			nd																																								
2-Methylnaphthalene																																											
Total PAHs			0																																								
Cyanide, total (Exygen/ Test America)			346		459	360	214	214	138	174	23	187	203	130	220	254	297	293	307											602	617	700	840	750	880	740	730	1300	1100	1500	1700	1700	1570	1690
Cyanide, total (Clarkson Univ.)																	332	297	305	299	266	368	317	429	467	540	531	504	566															
Cyanide, free (Exygen/ Test America)						nd	nd	147	nd	nd	17	13	nd	89	20	95	12	104	nd											7.0	9.0	7.0	9.5	37	32.0	9.5	7.2	20	13.0	20	11	8	17	38.8
Cyanide, free (Clarkson Univ.)																3.4	2.8	nd	nd	nd	nd	nd	nd	4	6.9	5.0	5.5	4.4	2.4															
Water Elevation (feet)			580.17	581.49	579.66	581.81	581.59	580.06	580.77	582.08	580.23	580.34	581.92	580.42	580.95	582.83	581.35	581.72	581.08	579.91	582.14	580.56	582.87	578.25	581.82	581.7	582.26	581.28	582.21	580.23	584.06	580.04	582.00	576.28	582.59	580.78	582.87	579.61	582.58	580.49	582.87	578.24	582.42	581.99

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.32	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Toluene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Xylene (sum of isomers)				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.63	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Total BTEX				0	0	0	0	0	0	0	0	0	0	0	0	0.32	0	0	0	0	0	0	0	1.73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acenaphthene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Acenaphthylene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Anthracene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.61	nd	1.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.50	nd	1.80	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.54	nd	2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.7	nd	1.6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.59	nd	1.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Chrysene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.63	nd	1.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.83	nd	4.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluoranthene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.73	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluorene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.76	nd	4.4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Naphthalene				nd	nd	nd	nd	3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.75	nd	nd	nd	nd	1.5	0.5	no	0.45
Phenanthrene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Pyrene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.75	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene							nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Total PAHs				0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.16	0	20.08	0	0	0	0.75	0	0	0	0	1.5	0.53	0	0.45
Cyanide, total (Exygen/ Test America)				34	nd	27	65	38	74	185	127	108	185	50	66	378	106	160	217											93	297	230	210	81	160	98	198	160	220	89	240	60	124	173
Cyanide, total (Clarkson Univ.)																	142	162	260	161	263	183	369	148	285	144	279	148	242															
Cyanide, free (Exygen/ Test America)						nd	13	nd	nd	nd	nd	nd	nd	16	nd	nd	nd	nd	61											nd	4	nd	0.98	nd	1.20	nd	nd	nd	nd	9.5	nd	nd	nd	nd
Cyanide, free (Clarkson Univ.)																nd	nd	nd	nd	nd	5.2	nd	nd	nd	5.9	nd	5.0	nd	nd															
Water Elevation (feet)				582.36	579.73	581.90	581.96	580.12	580.88	582.38	579.86	580.48	582.01	580.46	580.96	582.40	581.27	581.72	582.71	579.96	582.14	580.62	582.87	578.36	583.02	581.13	582.30	581.36	582.61	580.18	583.98	NM	581.93	578.92	582.68	580.77	582.86	579.68	582.58	580.46	582.89	578.43	582.53	581.95

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02
Benzene				nd	nd	nd	nd	nd	nd	nd
Toluene				nd	nd	nd	nd	1.1	nd	nd
Ethylbenzene				nd	nd	nd	nd	nd	nd	nd
Xylene (sum of isomers)				nd	nd	nd	nd	nd	nd	nd
Total BTEX				0	0	0	0	1.1	0	0
Naphthalene				nd	nd	nd	nd	nd	nd	nd
Acenaphthylene				nd	nd	nd	nd	nd	nd	nd
Acenaphthene				nd	nd	nd	nd	nd	nd	nd
Fluorene				nd	nd	nd	nd	nd	nd	nd
Phenanthrene				nd	nd	nd	nd	nd	nd	nd
Anthracene				nd	nd	nd	nd	nd	nd	nd
Fluoranthene				nd	nd	nd	nd	nd	nd	nd
Pyrene				nd	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene				nd	nd	nd	nd	nd	nd	nd
Chrysene				nd	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene				nd	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene				nd	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene				nd	nd	nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene				nd	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene				nd	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene				nd	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene							nd	nd	nd	nd
Total PAHs				0	0	0	0	0	0	0
Cyanide, total (Exygen/ Test America)				nd	nd	nd	13	nd	nd	nd
Cyanide, total (Clarkson Univ.)										
Cyanide, free (Exygen/ Test America)						nd	nd	24	nd	nd
Cyanide, free (Clarkson Univ.)										
Water Elevation (feet)				585.46	582.65	585.06	585.40	583.84	583.84	582.74

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene					4700	5700	6000	4600	4700	4800	3800	4200	4600		5300	4900	6000	5800	7500	5800	5800	5600	6700	4500	5200	3700	3700	3700	4300	4700	4400	4200	3800	4300	4000	4800	5200	5800	5300	5400	4700	4900	4000	5300
Toluene					nd	nd	nd	160	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	2.9	nd	nd	nd	nd	nd	100	nd	nd
Ethylbenzene					nd	280	260	nd	nd	160	150	140	170		130	170	330	180	350	270	260	200	220	100	210	120	180	170	290	230	280	170	190	130	210	300	550	310	400	430	370	270	410	500
Xylene (sum of isomers)					1500	2200	1500	930	660	580	470	540	560		400	440	1000	660	950	770	730	810	710	470	780	510	470	450	340	190	nd	nd	nd	nd	nd	75	nd	nd	nd	nd	nd	200	84	nd
Total BTEX					6200	8180	7760	5690	5360	5540	4420	4880	5330		5830	5510	7330	6640	8800	6840	6790	6610	7630	5070	6190	4330	4350	4320	4930	5120	4680	4370	3990	4430	4210	5178	5750	6110	5700	5830	5070	5170	4410	5800
Acenaphthene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.5	nd	nd	nd	nd	0.27	nd	nd	nd	nd	nd	nd	0.74	nd	nd	nd	nd	nd	nd	nd
Acenaphthylene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Anthracene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Chrysene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluoranthene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluorene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Naphthalene					1,900	2,200	2,200	2,000	2,100	2,300	2,000	2,100	2,400	2,100	2,000	2,700	2,900	2,800	3,000	2,600	2,800	3,600	3,100	4,600	4,100	2,600	3,600	3,600	3,300	3,700	3,300	2,700	3,200	2,900	2,600	4,200	5,500	5,400	4,600	5,700	3,900	2,900	6,200	4,400
Phenanthrene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Pyrene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene							nd	0.82	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5.5	4.8	nd	5.5	4.7	3.5	6.2	6.7	7.2	7.6	9.3	6.1	6.2	11	9.5	nd	210	nd	nd	11	nd	nd	nd	nd
Total PAHs					1900	2200	2200	2001	2100	2300	2000	2100	2400	2100	2000	2700	2900	2800	3000	2600	2806	3605	3100	4606	4106	2603.5	3606.2	3606.7	3307.2	3707.87	3309.3	2706.1	3206.2	2911	2609.5	4,200	5,711	5,400	4,600	5,711	3,900	2,900	6,200	4,400
Cyanide, total (Exygen/ Test America)					1100																																							
Cyanide, total (Clarkson Univ.)																																											
Cyanide, free (Exygen/ Test America)																																											
Cyanide, free (Clarkson Univ.)																																											
Water Elevation (feet)					577.43	581.36	581.13	579.63	580.12	581.73	579.73	579.83	581.24	580.01	580.19	582.00	580.79	580.98	581.90	579.57	581.42	580.15	582.26	578.2	581.6	580.52	581.46	580.70	581.8	579.78	583.45	579.54	581.21	578.62	581.47	580.27	581.92	579.28	581.68	580.04	581.93	578.15	581.67	581.20

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05
Benzene					nd														
Toluene					nd														
Ethylbenzene					nd														
Xylene (sum of isomers)					nd														
Total BTEX					0														
Acenaphthene					nd														
Acenaphthylene					nd														
Anthracene					nd														
Benzo(a)Anthracene					nd														
Benzo(a)Pyrene					nd														
Benzo(b)Fluoranthene					nd														
Benzo(g,h,i)Perylene					nd														
Benzo(k)Fluoranthene					nd														
Chrysene					nd														
Dibenzo(a,h)Anthracene					nd														
Fluoranthene					nd														
Fluorene					nd														
Indeno(1,2,3-cd)Pyrene					nd														
Naphthalene					nd														
Phenanthrene					nd														
Pyrene					nd														
2-Methylnaphthalene																			
Total PAHs					0														
Cyanide, total (Exygen/ Test America)					344	450	295	439	46	455	361	8	506	399	21	501	242	387	644
Cyanide, total (Clarkson Univ.)																	242	444	402
Cyanide, free (Exygen/ Test America)						nd	13	nd	nd	nd	10	9	nd	44	14	nd	nd	53	13
Cyanide, free (Clarkson Univ.)																nd	nd	nd	nd
Water Elevation (feet)					576.67	579.24	578.86	576.76	577.15	579.20	577.49	576.60	578.34	576.90	577.16	578.96	577.42	577.82	578.82

MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20
DATE	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene																									
Toluene																									
Ethylbenzene																									
Xylene (sum of isomers)																									
Total BTEX																									
Acenaphthene																									
Acenaphthylene																									
Anthracene																									
Benzo(a)Anthracene																									
Benzo(a)Pyrene																									
Benzo(b)Fluoranthene																									
Benzo(g,h,i)Perylene																									
Benzo(k)Fluoranthene																									
Chrysene																									
Dibenzo(a,h)Anthracene																									
Fluoranthene																									
Fluorene																									
Indeno(1,2,3-cd)Pyrene																									
Naphthalene																									
Phenanthrene																									
Pyrene																									
2-Methylnaphthalene																									
Total PAHs																									
Cyanide, total (Exygen/ Test America)											139	690	560	790	280	730	390	660	150	890	640	1000	560	874	1000
Cyanide, total (Clarkson Univ.)	160	429	172	469	337	494	115	418	268	495															
Cyanide, free (Exygen/ Test America)											nd	6	nd	2.2	6.0	4.9	nd	2.0	nd	nd	5.9	nd	nd	nd	33.2
Cyanide, free (Clarkson Univ.)	nd	nd	nd	nd	2.6	3.2	nd	nd	nd	nd															
Water Elevation (feet)	576.60	578.20	577.07	579.03	575.78	578.43	577.4	578.78	577.87	578.9	577.11	580.62	576.41	578.45	574.20	579.25	577.23	579.81	579.28	579.37	580.04	579.76	575.85	579.19	578.34

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05
Benzene					nd														
Toluene					nd														
Ethylbenzene					nd														
Xylene (sum of isomers)					nd														
Total BTEX					0														
Naphthalene					nd														
Acenaphthylene					nd														
Acenaphthene					nd														
Fluorene					nd														
Phenanthrene					nd														
Anthracene					nd														
Fluoranthene					nd														
Pyrene					nd														
Benzo(a)Anthracene					nd														
Chrysene					nd														
Benzo(b)Fluoranthene					nd														
Benzo(k)Fluoranthene					nd														
Benzo(a)Pyrene					nd														
Indeno(1,2,3-cd)Pyrene					nd														
Dibenzo(a,h)Anthracene					nd														
Benzo(g,h,i)Perylene					nd														
2-Methylnaphthalene																			
Total PAHs					0														
Cyanide, total (Exygen/ Test America)					511	560	898	558	535	756	674	670	637	708	569	714	741	740	664
Cyanide, total (Clarkson Univ.)																	749	709	688
Cyanide, free (Exygen/ Test America)						nd	14	nd	nd	24	12	13	nd	11	nd	nd	nd	7	20
Cyanide, free (Clarkson Univ.)																nd	nd	nd	nd
Water Elevation (feet)					576.51	578.08	577.68	576.55	576.58	578.03	576.97	576.28	575.32	576.55	576.42	577.70	576.86	576.85	577.71

MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21
DATE	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene																									
Toluene																									
Ethylbenzene																									
Xylene (sum of isomers)																									
Total BTEX																									
Naphthalene																									
Acenaphthylene																									
Acenaphthene																									
Fluorene																									
Phenanthrene																									
Anthracene																									
Fluoranthene																									
Pyrene																									
Benzo(a)Anthracene																									
Chrysene																									
Benzo(b)Fluoranthene																									
Benzo(k)Fluoranthene																									
Benzo(a)Pyrene																									
Indeno(1,2,3-cd)Pyrene																									
Dibenzo(a,h)Anthracene																									
Benzo(g,h,i)Perylene																									
2-Methylnaphthalene																									
Total PAHs																									
Cyanide, total (Exygen/ Test America)											433	539	420	480	420	490	460	453	430	500	440	430	320	371	946
Cyanide, total (Clarkson Univ.)	545	404	448	574	560	543	417	485	441	508															
Cyanide, free (Exygen/ Test America)											nd	6	nd	1.6	nd	nd	nd	2.1	nd	nd	5.5	nd	nd	nd	26.6
Cyanide, free (Clarkson Univ.)	2.6	nd	nd	nd	nd	18.5	4.2	nd	nd	nd															
Water Elevation (feet)	576.38	577.28	576.75	578.38	576.79	577.42	576.94	577.35	576.93	577.43	576.67	579.32	575.29	577.09	575.89	577.59	576.80	578.24	576.54	577.82	576.89	578.05	576.05	577.87	577.52

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene					6																																							
Toluene					nd																																							
Ethylbenzene					nd																																							
Xylene (sum of isomers)					nd																																							
Total BTEX					6																																							
Naphthalene					nd																																							
Acenaphthylene					nd																																							
Acenaphthene					nd																																							
Fluorene					nd																																							
Phenanthrene					nd																																							
Anthracene					nd																																							
Fluoranthene					nd																																							
Pyrene					nd																																							
Benzo(a)Anthracene					nd																																							
Chrysene					nd																																							
Benzo(b)Fluoranthene					nd																																							
Benzo(k)Fluoranthene					nd																																							
Benzo(a)Pyrene					nd																																							
Indeno(1,2,3-cd)Pyrene					nd																																							
Dibenzo(a,h)Anthracene					nd																																							
Benzo(g,h,i)Perylene					nd																																							
2-Methylnaphthalene																																												
Total PAHs					0																																							
Cyanide, total (Exygen/ Test America)					487	600	1010	734	460	703	1570	467	604	560	1080	741	504	803	941											778	1030	860	1000	870	1100	770	746	790	770	990	1600	760	676	830
Cyanide, total (Clarkson Univ.)																	676	759	628	534	587	540	642	641	666	785	704	690	771															
Cyanide, free (Exygen/ Test America)						nd	nd	201	nd	nd	49	231	267	88	49	132	nd	207	99											nd	7	nd	5.5	26	9.2	14.1	24.0	11.6	11.2	6.5	8.3	nd	12.0	24.6
Cyanide, free (Clarkson Univ.)																nd	8	nd	3.1	2.4	nd	nd	nd	4.3	5.9	3.3	3.1	3.4	nd															
Water Elevation (feet)					578.80	580.70	580.51	579.09	579.50	581.25	580.05	579.10	580.62	579.42	579.47	581.27	580.05	580.22	581.28	579.13	580.69	579.60	581.75	578.02	581.03	579.93	580.86	580.03	581.19	579.29	583.13	578.99	580.56	578.26	581.17	579.69	581.51	578.85	581.18	579.53	581.37	577.93	581.20	580.56

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Toluene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Ethylbenzene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Xylene (sum of isomers)						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Total BTEX						0						0			0			0				0				0		0		0		0		0		0		0		0		0		0
Acenaphthene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Acenaphthylene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Anthracene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Benzo(a)Anthracene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Benzo(a)Pyrene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Benzo(b)Fluoranthene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Benzo(g,h,i)Perylene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Benzo(k)Fluoranthene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Chrysene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Dibenzo(a,h)Anthracene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Fluoranthene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Fluorene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Indeno(1,2,3-cd)Pyrene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Naphthalene						nd						nd			nd			nd				3.6				nd		nd		nd		nd		nd		1.2		1.5		0.52		nd		0.46
Phenanthrene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Pyrene						nd						nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
2-Methylnaphthalene												nd			nd			nd				nd				nd		nd		nd		nd		nd		nd		nd		nd		nd		nd
Total PAHs						0						0			0			0				3.6				0		0		0		0		0		1.2		1.5		0.52		0		0.46
Cyanide, total (Exygen/ Test America)						480	658	469	654	480	425	728	356	620	729	587	446	437	274											299	307	360	220	330	570	780	684	670	490	480	120	300	236	329
Cyanide, total (Clarkson Univ.)																	493	560	359	325	267	321	326	374	252	344	276	320	277															
Cyanide, free (Exygen/ Test America)						nd	nd	nd	nd	nd	12	10	nd	15	6	5	9	5	57											nd	6	4	2.4	nd	0.7	8.1	nd	nd	nd	22.3	nd	nd	nd	166.0
Cyanide, free (Clarkson Univ.)																nd	nd	nd	nd	nd	nd	nd	nd	nd	3.2	11.7	nd	nd	nd															
Water Elevation (feet)						578.66	578.30	577.40	577.58	578.69	577.83	577.18	578.11	577.40	577.29	578.54	577.83	577.91	578.61	577.44	578.19	577.63	578.95	577.19	578.37	577.83	578.16	577.95	578.44	577.53	580.42	577.09	578.03	576.78	578.59	577.67	579.05	577.43	578.63	577.75	578.86	576.96	577.74	578.53

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	0.44	nd	nd	nd	nd	nd	nd	nd	Dry	nd	nd	nd	nd	nd	nd	nd	0.15	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Toluene			nd				nd	nd	nd	nd	2	nd	nd	nd	nd	0.38	nd	nd	nd	0.47	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	0.22	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.23	nd			nd	nd	nd	nd	nd	nd	nd	0.6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Xylene (sum of isomers)			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	0.54	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Total BTEX			0				0	0	0	0	2	0	0	0	0	0.82	0	0	0	0.47	0	0.23	0		0	0	0	0	0	0	0	1.51	0	0	0	0	0	0	0	0	0	0	0
Acenaphthene			nd				nd	1.1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Acenaphthylene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Anthracene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.61	nd	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1	nd	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.53	nd	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.56	nd	nd	nd	nd	nd	nd	nd
Chrysene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluoranthene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.5	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.8	nd	nd	nd	nd	nd	nd	nd
Fluorene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Naphthalene			nd				nd	2.9	nd	nd	nd	1.6	nd	nd	nd	nd	nd	nd	nd	32	nd	nd			2.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.2	nd	nd	nd	0.76	nd	nd
Phenanthrene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.64	nd	nd	nd	nd	nd	nd	nd
Pyrene			nd				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.4	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.3	nd	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene							nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd			nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Total PAHs			0				0	4	0	0	0	1.6	0	0	0	0	0	0	0	0.9	32	0	0		2.3	0	0	0	0	0	0	0	0	0	0	0	7.64	0	0	0	0.76	0	0	0
Cyanide, total (Exygen/ Test America)			12.2				21	55	35	8	405	21	13	88	36	989	40	38	9										12.6	30.3	11	16	96	14	nd	11	25	7.2	5.2	nd	92	25.5	nd	
Cyanide, total (Clarkson Univ.)																	46	53	10	5	4	24	nd		14	5	25	23	3.6														
Cyanide, free (Exygen/ Test America)							nd	16	nd	nd	29	6	nd	10	nd	86	6	19	nd										nd	6	nd	1.5	21	2.5	nd	nd	6	nd	7	nd	33	11	nd	
Cyanide, free (Clarkson Univ.)																98.1	nd	nd	3.2	2.4	2.3	2.4	5		nd	nd	nd	nd	2.6														
Water Elevation (feet)					579.80	580.40	580.10	580.00	580.10	581.00	579.60	579.80	580.70	581.40	582.00	582.30	580.60	581.30	581.30	579.90	581.60	580.20	582.80		581.57	581.80	581.55	580.83	582.25	580.19	580.19	580.19	581.6	580.6	581.95	581.65	582.5	581.35	NM	581.23	583.12	NM	581.7	581.76

Notes:

nd - non-detect

open space - no data

Appendix A - Groundwater and Surface Water Monitoring Results
2017 Periodic Review Report
Mineral Springs Road Former Manufactured Gas Plant Site

(All Units in µg/L)

SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03	Nov-03	Mar-04	Jun-04	Nov-04	Apr-05	Jul-05	Apr-06	Aug-06	Apr-07	Aug-07	Apr-08	Sep-08	Apr-09	Aug-09	Apr-10	Aug-10	Apr-11	Sep-11	Apr-12	Aug-12	Apr-13	Aug-13	Apr-14	Aug-14	Apr-15	Aug-15	Apr-16	Aug-16	Apr-17	Aug-17
Benzene			nd		nd	6	2	nd	nd	1.2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	Dry	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Toluene			nd		nd	8	2	nd	nd	0.25	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	0.23	0.18	7.2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene			nd		nd	15	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Xylene (sum of isomers)			nd		nd	24	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Total BTEX			0		0	53	4	0	0	1.45	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0.23	0.18	7.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acenaphthene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Acenaphthylene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Anthracene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	0.19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	0.49	nd	1.5	nd	nd	nd	0.26	nd	nd	nd	2.7	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	0.63	nd	1.1	nd	nd	nd	nd	nd	nd	nd	4.2	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	1.2	nd	1.3	nd	1.7	nd	nd	nd	nd	1.4	8.3	nd	3.1	nd	nd	nd	nd
Benzo(g,h,i)Perylene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	0.55	nd	1.5	nd	nd	nd	nd	nd	nd	nd	2.2	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	1.2	nd	nd	nd	nd	nd	nd	0.69	nd	nd	nd	nd	nd	nd	nd
Chrysene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	0.85	nd	1.2	nd	nd	nd	0.30	nd	nd	nd	4.70	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	1.3	nd	nd	nd	nd	nd	nd	nd	0.45	nd	nd	nd	nd	nd	nd
Fluoranthene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	1.2	nd	0.63	nd	1.2	nd	0.50	nd	nd	2.40	8.20	nd	3.3	nd	nd	nd	nd
Fluorene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	1.3	nd	nd	nd	nd	nd	nd	nd	1.9	nd	nd	nd	nd	nd	nd
Naphthalene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		0.94	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	2.2	nd	nd	nd	nd	nd	nd
Phenanthrene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	0.72	nd	nd	nd	nd	nd	nd	nd	nd	nd	2.4	nd	nd	nd	nd	nd	nd
Pyrene			nd		nd	nd	nd	0.77	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	1.1	nd	0.55	nd	0.92	nd	0.33	nd	nd	1.8	6.5	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene							nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Total PAHs			0		0	0	0	0.77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0.94	0	0	1.82	0	11.77	0	3.82	0	1.39	0	0	6	43.75	0	6.4	0.0	0.0	0	0
Cyanide, total (Exygen/ Test America)			77.5		nd	380	121	nd	7	130	nd	1440	17	30	62	48	nd	24	nd										369	nd	93	45	14	95	nd	11	15	96	160	12	nd	253	195
Cyanide, total (Clarkson Univ.)																	nd	50	nd	nd	3	nd	nd		86	86	16	141	4.4															
Cyanide, free (Exygen/ Test America)						111	nd	nd	nd	16	nd	42	nd	nd	nd	20	nd	12	nd										nd	6	11	11	nd	26	0.76	1.6	nd	30.1	7.2	nd	nd	72	24.6
Cyanide, free (Clarkson Univ.)																19.2	nd	6.2	nd	nd	2.3	nd	8.6		50.7	10.1	nd	3.0	nd															
Water Elevation (feet, approximate)					580.3	580.9	580.6	580.5	580.6	581.5	580.1	580.3	581.1	581.8	582.4	582.7	581.0	581.7	581.7	580.3	582.0	580.6	583.2		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	581.8

Notes:

nd - non-detect

open space - no data

Appendix B

Annual Site Inspection Form

Annual Site Inspection Form

Mineral Springs Road Former MGP

Inspection by: Randolph West Affiliation: AECOM

Signature: Date: April 18, 2017

ASPHALT CAP SOUTH OF BUILDING #3

Cracks or ruts ?	(Yes)	No
Erosion at edges ?	Yes	(No)
Blue-stained soil ?	Yes	(No)

Comments:
Some areas of significant cracking.

ASPHALT CAP EAST OF BUILDING #3 B3EAC
Also B8WAC, B10AC

Cracks or ruts ?	(Yes)	No
Erosion at edges ?	Yes	(No)
Blue-stained soil ?	Yes	(No)

Comments:
B10AC - One small area of significant cracking; otherwise acceptable.

ASPHALT CAP NORTH OF EASTERN SWALE ESNAC

Cracks or ruts ?	Yes	(No)
Erosion at edges ?	Yes	(No)
Blue-stained soil ?	Yes	(No)

Comments:

ASPHALT CAP SOUTH OF EASTERN SWALE ESSAC

Cracks or ruts ?	Yes	(No)
Erosion at edges ?	Yes	(No)
Blue-stained soil ?	Yes	(No)

Comments:

HDPE/SOIL CAP IN EASTERN SWALE ESHC

Cracks or ruts ?	Yes	(No)
Erosion at edges ?	Yes	(No)
Blue-stained soil ?	Yes	(No)

Comments:

CLAY CAP BEHIND BUILDING #14

Animal dens ?	Yes	(No)
Erosion ?	Yes	(No)
Trees ?	Yes	(No)
Blue-stained soil ?	Yes	(No)

Comments:

EASTERN DRAINAGE DITCH EDD

Animal dens ?	Yes	(No)
Erosion ?	Yes	(No)
Trees ?	Yes	(No)
Blue-stained soil ?	Yes	(No)
Hydrocarbon sheen ?	Yes	(No)
Inadequate Signage ?	Yes	(No)
Trash / Debris ?	Yes	(No)

Comments:
High water levels in stream create standing water in south portion of EDD. Some standing water observed in mid-section.

BACKFILLED EXCAVATIONS

Excessive settlement ?	Yes	(No)
Ponding of surface water ?	Yes	(No)
Tar boils ?	Yes	(No)
Blue-stained soil ?	Yes	(No)

Comments:

CLASS D STREAM

Hydrocarbon sheen ?	Yes	(No)

Comments:

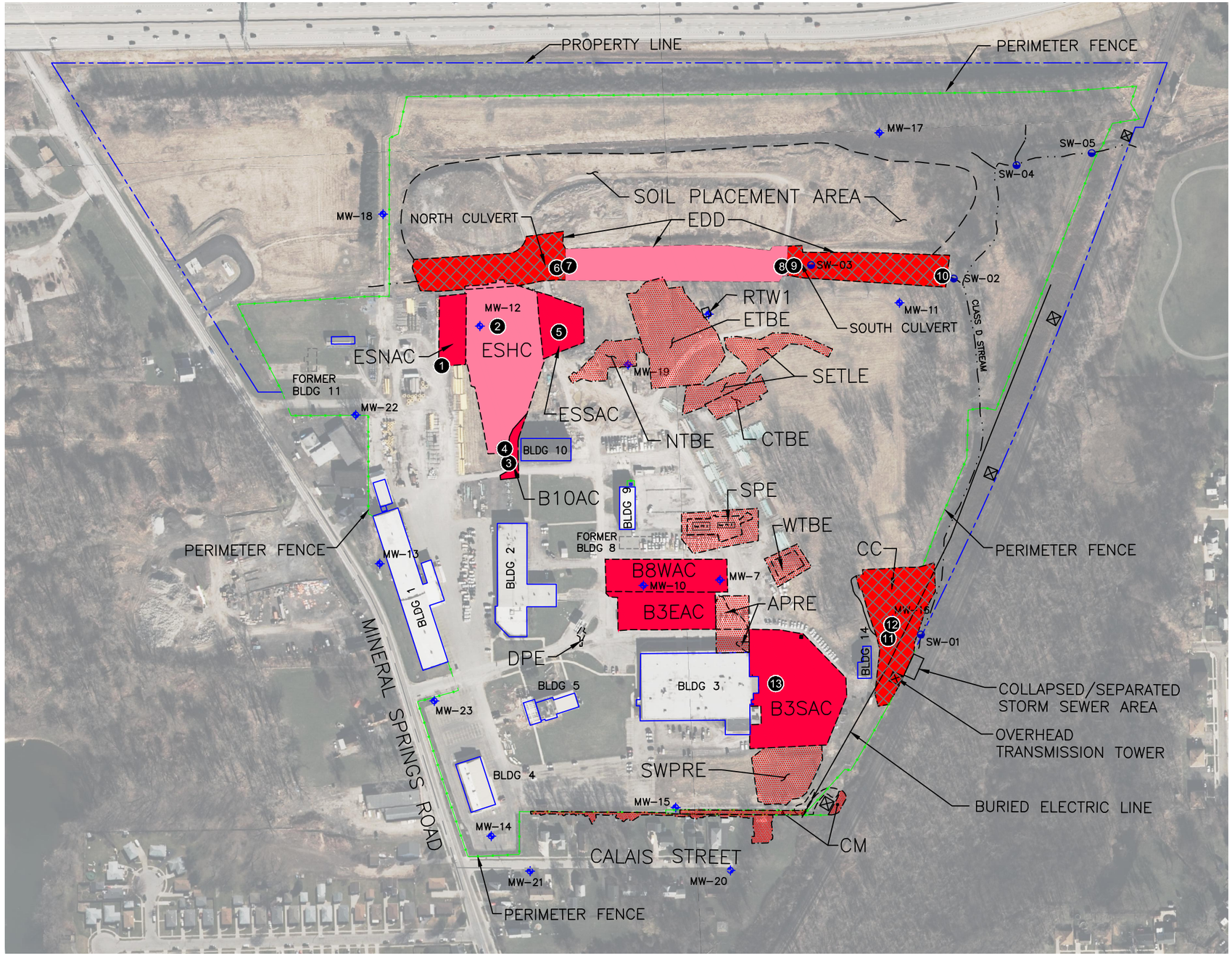
SITE FENCE

Damage / Holes ?	Yes	(No)

Comments:

Appendix C

Photographs



150 0 300

GRAPHIC SCALE IN FEET

LEGEND

	EXISTING STRUCTURE
	REMEDIAL CONSTRUCTION
	FORMER STRUCTURE
	EXISTING EXCAVATION LIMITS
MW-7	MONITORING WELLS
SW-01	SURFACE WATER SAMPLE LOCATION
APRE	ADDITIONAL PURIFIER RESIDUALS EXCAVATION
B3EAC	BUILDING 3 EAST ASPHALT CAP
B3SAC	BUILDING 3 SOUTH ASPHALT CAP
B8WAC	BUILDING 8 WEST ASPHALT CAP
B10AC	BUILDING 10 ASPHALT CAP
CC	CLAY CAP
CM	CORRECTIVE MEASURE WEST PROPERTY LINE
CTBE	CENTRAL TAR BOILS EXCAVATION
DPE	DIESEL PAD EXCAVATION
EDD	EASTERN DRAINAGE DITCH
ESHC	EASTERN SWALE HDPE CAP
ESNAC	EASTERN SWALE NORTH ASPHALT CAP
ESSAC	EASTERN SWALE SOUTH ASPHALT CAP
ETBE	EASTERN TAR BOILS EXCAVATION
NTBE	NORTHERN TAR BOILS EXCAVATION
RTW1	RECOVERY TEST WELL AND DNAPL SHED
SETLE	SOUTHEASTERN TAR LENSES EXCAVATION
SPE	SEPARATOR PITS EXCAVATION
SWPRE	SOUTHWEST RESIDUALS EXCAVATION
WTBE	WESTERN TAR BOILS EXCAVATION
	CLAY CAP
	ASPHALT CAP
	HDPE CAP
	REMEDIAL EXCAVATION
10	PHOTO LOCATION

PREVIOUSLY REMEDIATED AREAS ARE SHADED RED

AECOM

MINERAL SPRINGS ROAD FACILITY
NATIONAL FUEL GAS
60538249-100

PHOTOGRAPH LOCATION FIGURE

DATE: 6/23/15 | DRWN: GRI | | | **FIGURE**

File: C:\0-tam\FOR REPORT\60538249-100_FIGURE PHOTO.dwg Layout: Site Plan (B-300) User: heather.pressing Plotted: Sep 29, 2017 - 3:33pm Xref's:

Looking east at Eastern Swale North Asphalt Cap (ESNAC), in good condition.

PHOTOGRAPH LOG NATIONAL FUEL MINERAL SPRINGS ROAD FORMER MGP SITE 2017 ANNUAL INSPECTION	PHOTOGRAPH NO. 1

Looking west at French drain in Eastern Swale HDPE Cap (ESHC), in good condition.

PHOTOGRAPH LOG NATIONAL FUEL MINERAL SPRINGS ROAD FORMER MGP SITE 2017 ANNUAL INSPECTION	PHOTOGRAPH NO. 2

Look east at portion of the Building 10 Asphalt Cap (B10AC) observed with significant cracking that requires patching or repaving.

Looking east at stable portion of the Building 10 Asphalt Cap (B10AC).

Looking east at Eastern Swale South Asphalt Cap (ESSAC), in good condition.

The outlet to the north culvert to the mid-section (HDPE cap) of the Eastern Drainage Ditch (EDD).

Looking south at the mid-section (HDPE cap) of the Eastern Drainage Ditch (EDD).

Looking north at the mid-section (HDPE cap) of the Eastern Drainage Ditch (EDD).

The outlet of the south culvert to the southern portion (clay cap) of the Eastern Drainage Ditch (EDD).

Looking north at the southern portion (clay cap) of the Eastern Drainage Ditch (EDD), just upstream of connection with unnamed tributary.

Looking east at the Clay Cap (CC) area. No issues noted.

Looking west at the Clay Cap (CC) area. No issues noted. Animal burrow noted last year at the foot of the electrical tower (left edge of picture) has been filled.

Looking northwest at a portion of the Building 3 South Asphalt Cap (B3SAC) showing an area with some significant cracking that needs to be sealed or patched.

Appendix D

Institutional and Engineering Controls Certification Form

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **V00195**

Site Name NFG - Mineral Springs MGP

Site Address: 365 Mineral Springs Road Zip Code: 14210
City/Town: West Seneca
County: Erie
Site Acreage: 80.0

Reporting Period: September 16, 2016 to September 16, 2017

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. V00195

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
123.16-2-8	National Fuel Gas Distribution Corp.	Ground Water Use Restriction Landuse Restriction

i. All identified capped areas shall continue to be protective of public health and the environment, and shall continue to be maintained and monitored to be consistent with industrial/commercial use.

ii. The owner of the Property shall prohibit the Property from ever being used for purposes other than for an industrial/commercial operation, office, warehouse and garage facility and for the services associated with such use without the express written waiver of such prohibition by the Relevant Agency.

iii. The owner of the Property shall prohibit the use of the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Relevant Agency.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
123.16-2-8	Cover System Fencing/Access Control

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☒	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☒	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. V00195

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I CRAIG K. SWIECH (print name) at NATIONAL FUEL 365 MINERAL SPRINGS RD BUFFALO, NY 14210 (print business address)

am certifying as OWNER (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Craig K. Swiech
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

11/6/17
Date

IC/EC CERTIFICATIONS

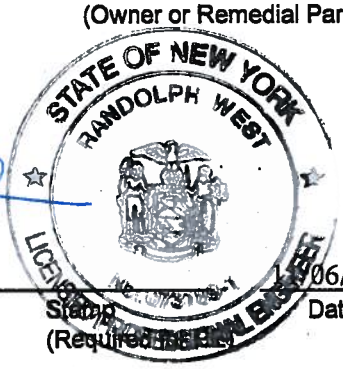
Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Randolph West (print name) at AECOM; 257 W. Genesee St., Buffalo, NY 14202 (print business address),

am certifying as a Professional Engineer for the National Fuel Gas (Owner or Remedial Party)



Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

11/06/17
Date